



TEST REPORT ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03)	
Report Reference No.: HTT202103347E-1	
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Date of issue.....: Mar.23,2021	
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 Sycreader RFID Technology Co., Ltd.	
Address: Rm.2001,20/F,Huichao Technology Building,Jinhai Road, Xixiang Street,Baoan District,Shenzhen,China.	
Test specification:	
Standard: ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03)	
Test item description: barcode scanner	
Trade Mark: SYCREADER Shenzhen Sycreader RFID Technology Co., Ltd.	
Manufacturer: Rm.2001,20/F,Huichao Technology Building,Jinhai Road, Xixiang Street,Baoan District,Shenzhen,China.	
Model/Type reference: V2-W	
List Model: S10, S20, S30, S40, S50, U1, U2, U3, U4, U5, U6, U7, U8, U9, U10, U11, U12, U13, U14, V1, V2, V3, V4, V5, V6, V7, V8, V9, V10, V11, V12, V13, V14, R26, R27, R28, R35, R36, R37, R45, R46, R47, R48, R58, R59, R68, R69, R78, R79, R88	
Ratings: DC 3.7V From Battery and DC 5V From External Circuit	
Result: PASS	





TEST REPORT

Equipment under Test : barcode scanner

Model /Type : V2-W

Listed Models : S10, S20, S30, S40, S50, U1, U2, U3, U4, U5, U6, U7, U8, U9, U10, U11, U12, U13, U14, V1, V2, V3, V4, V5, V6, V7, V8, V9, V10, V11, V12, V13, V14, R26, R27, R28, R35, R36, R37, R45, R46, R47, R48, R58, R59, R68, R69, R78, R79, R88

Applicant : Shenzhen Sycreader RFID Technology Co., Ltd.

Address : Rm.2001,20/F,Huichao Technology Building,Jinhai Road, Xixiang Street,Baoan District,Shenzhen,China.

Manufacturer : Shenzhen Sycreader RFID Technology Co., Ltd.

Address : Rm.2001,20/F,Huichao Technology Building,Jinhai Road, Xixiang Street,Baoan District,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.



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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 301 489-3 V2.1.1 (2019-03)—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	:	Mar.17,2021
Testing commenced on	:	Mar.17,2021
Testing concluded on	:	Mar.23,2021

2.2. Product Description

Product Name:	barcode scanner
Trade Mark:	SYCREADER
Model/Type reference:	V2-W
List Model:	S10, S20, S30, S40, S50, U1, U2, U3, U4, U5, U6, U7, U8, U9, U10, U11, U12, U13, U14, V1, V2, V3, V4, V5, V6, V7, V8, V9, V10, V11, V12, V13, V14, R26, R27, R28, R35, R36, R37, R45, R46, R47, R48, R58, R59, R68, R69, R78, R79, R88
Power supply:	DC 3.7V From Battery and DC 5V From External Circuit
Modulation Type	GFSK
Operation frequency	2407.95MHz-2457.95MHz

2.3. EUT operation mode

Test mode	2.4G
1	■

Note:

1. ■ is operation mode.
2. Pre-scan above all test mode, found below test mode which it was worse case mode.

Test item	Test mode (Worse case mode)
Conducted emission (AC Mains)	Mode 1
Conducted emission (network port)	Mode 1
Radiated emission	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
Lative 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 V2.1.1 (2019-03)	PASS
Conducted Emission	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03)	PASS
Harmonic Current Emissions	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03)	N/A
Voltage Fluctuations and Flicker	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03)	N/A
Immunity Measurement		
Electrostatic Discharge	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03)	PASS
RF Electromagnetic Field	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03)	PASS
Fast Transients Common Mode	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03)	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 V2.1.1 (2019-03)	PASS
Voltage Dips and Interruptions	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03)	PASS
Surges	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03)	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	4.24 dB	(1)
Radiated Emission	1~18GHz	5.16 dB	(1)
Conducted Disturbance	0.15~30MHz	3.39 dB	(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

CONDUCTED EMISSION

Item	Kind of Equipment	Manufacturer	Type No.	Last calibration	Calibrated until	Calibration period
1	LISN	R&S	ENV216	2020/06/10	2021/06/09	1 year
2	LISN	R&S	ENV216	2020/06/10	2021/06/09	1 year
3	EMI Test Receiver	R&S	ESCI-7	2020/06/10	2021/06/09	1 year
4	Wideband Radio Communication tester	R&S	CMW500	2020/06/10	2021/06/09	1 year

RADIATED TEST SITE

Item	Kind of Equipment	Manufacturer	Type No.	Last calibration	Calibrated until	Calibration period
1	Spectrum analyzer	R&S	FSU26	2020/06/10	2021/06/09	2 year
2	Trilog Broadband Antenna	Schwarzbeck	VULB9163	2020/06/10	2021/06/09	1 year
3	Double Ridged Horn Antenna	R&S	HF907	2020/06/10	2021/06/09	1 year
4	Pre-Amplifier	R&S	SCU-01	2020/06/10	2021/06/09	2 year
5	Pre-amplifier	A.H.	PAM0-0118	2020/06/10	2021/06/09	1 year
6	RF Cable	R&S	R01	2020/06/10	2021/06/09	1 year
7	RF Cable	R&S	R02	2020/06/10	2021/06/09	1 year
8	RF Cable	R&S	R01	2020/06/10	2021/06/09	1 year
9	RF Cable	R&S	R02	2020/06/10	2021/06/09	1 year

HARMONICS AND FILCK

Item	Kind of Equipment	Manufacturer	Type No.	Last calibration	Calibrated until	Calibration period
1	Harmonic flicker tester	California Instruments	5001ix	2020/06/10	2021/06/09	1 year
2	Wideband Radio Communication tester	R&S	CMW500	2020/06/10	2021/06/09	1 year

ESD

Item	Kind of Equipment	Manufacturer	Type No.	Last calibration	Calibrated until	Calibration period
1	ESD device	Schloder	SESD 216	2020/06/10	2021/06/09	1 year
2	Wideband Radio Communication tester	R&S	CMW500	2020/06/10	2021/06/09	1 year



RS

Item	Kind of Equipment	Manufacturer	Type No.	Last calibration	Calibrated until	Calibration period
1	Signal generator	Agilent	83630A	2020/06/10	2021/06/09	1 year
2	Hf antenna	Schwarzbeck	LB-180400-KF	2020/06/10	2021/06/09	2 year
3	Power amplifier	R&S	NTWPA-1060040E	2020/06/10	2021/06/09	1 year
4	Broadband antenna	Schwarzbeck	VULB 9163	2020/06/10	2021/06/09	2 year
5	Power amplifier	R&S	5225F	2020/06/10	2021/06/09	1 year
6	Wideband Radio Communication tester	R&S	CMW500	2020/06/10	2021/06/09	1 year

SURGE, EFT/BURST, VOLTAGE INTERRUPTION/DIPS

Item	Kind of Equipment	Manufacturer	Type No.	Last calibration	Calibrated until	Calibration period
1	Full-featured immunity tester	HTEC	HV1P16T	2020/06/10	2021/06/09	1 year
2	Group pulse coupling clamp	HTEC	H3C	2020/06/10	2021/06/09	1 year
3	Wideband Radio Communication tester	R&S	CMW500	2020/06/10	2021/06/09	1 year

INJECTION CURRENT

Item	Kind of Equipment	Manufacturer	Type No.	Last calibration	Calibrated until	Calibration period
1	Integrated Conduction Sensitivity Test System	Schloder	CDG6000	2020/06/10	2021/06/09	1 year
2	Wideband Radio Communication tester	R&S	CMW500	2020/06/10	2021/06/09	1 year

The calibration interval is 1 yea

4. TEST CONDITIONS AND RESULTS

4.1. EMISSION

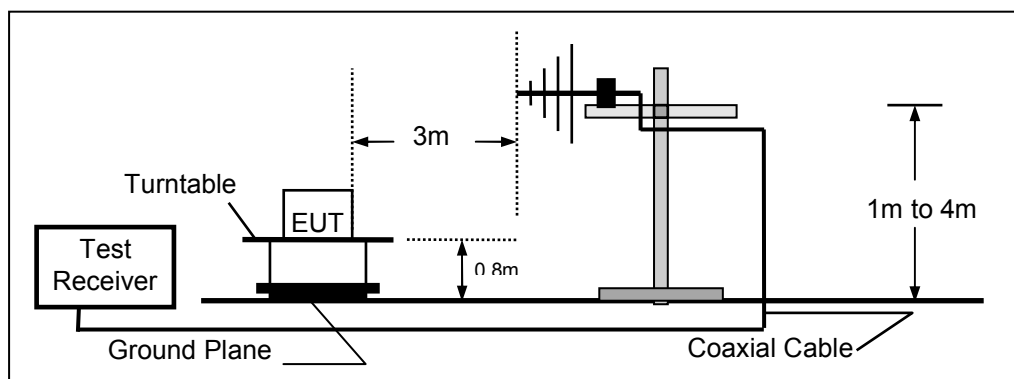
4.1.1. Radiated Emission

LIMIT

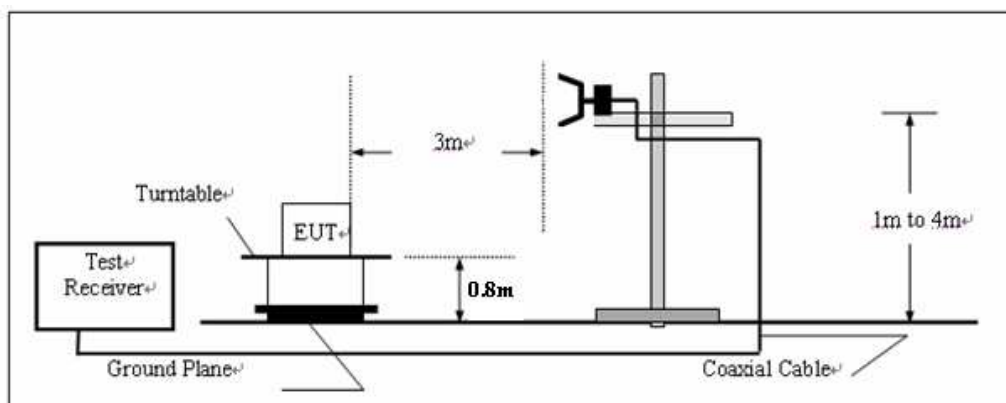
Please refer to ETSI EN301489-1 Clause 8.2.3, Table 4 and EN55032 Annex A, Table A.2,A.3, and Class B

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:

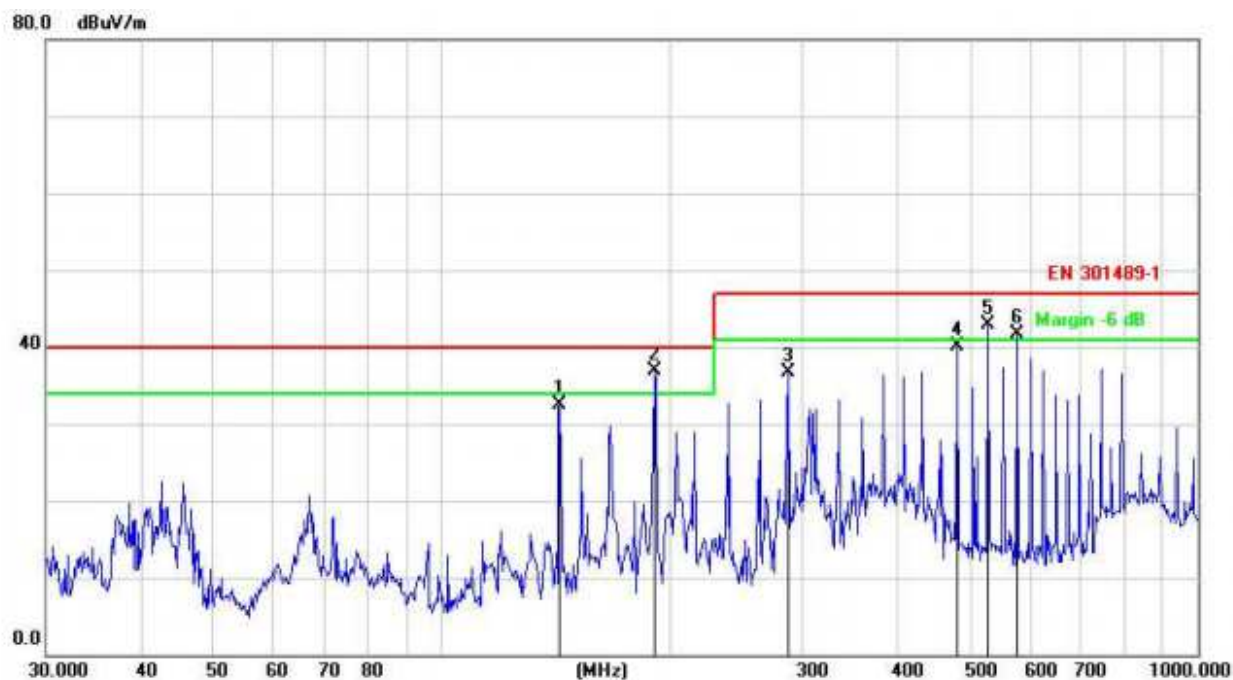


Test mode:

Mode 1

Polarization

Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		143.3259	50.72	-18.20	32.52	40.00	-7.48	peak		
2	*	191.7450	56.82	-19.94	36.88	40.00	-3.12	peak		
3		287.9904	55.46	-18.70	36.76	47.00	-10.24	peak		
4		480.5276	55.71	-15.67	40.04	47.00	-6.96	peak		
5	!	528.2458	57.15	-14.32	42.83	47.00	-4.17	peak		
6	!	576.6443	55.37	-13.61	41.76	47.00	-5.24	peak		

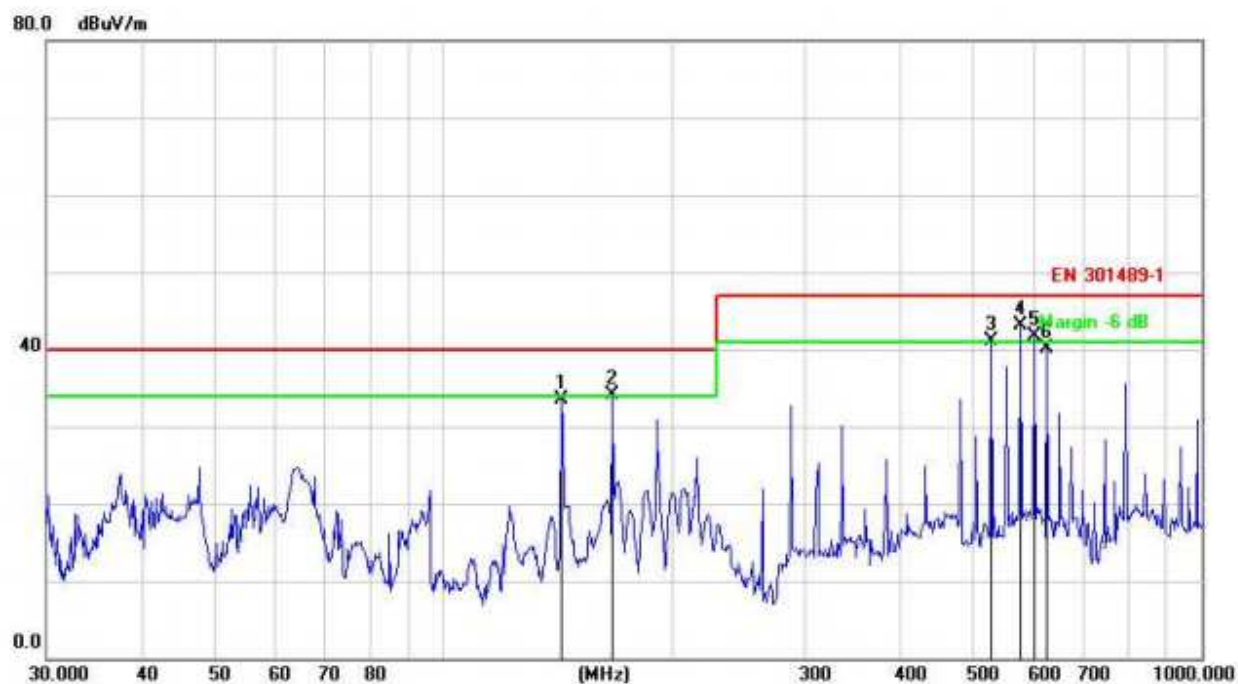


Test mode:

Mode 1

Polarization

Vertical



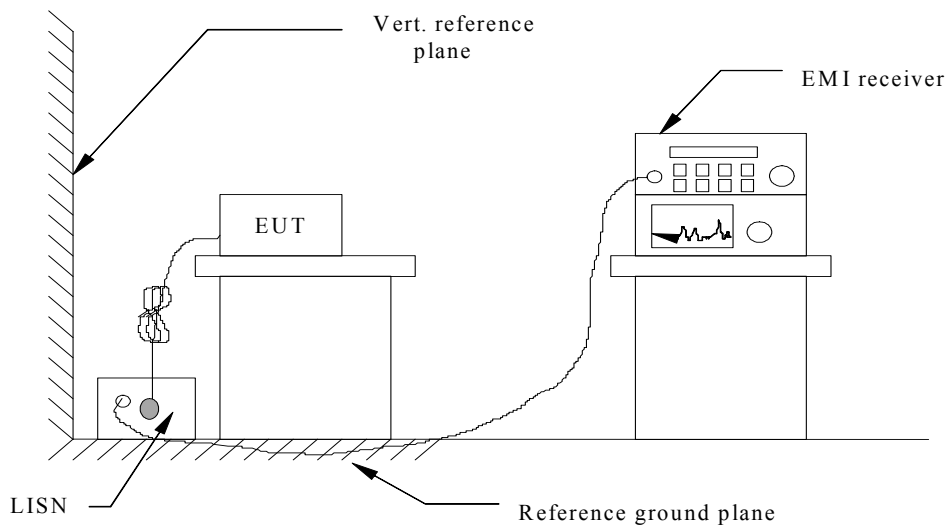
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		143.3258	51.73	-18.20	33.53	40.00	-6.47	peak		
2	!	167.2366	50.40	-16.38	34.02	40.00	-5.98	peak		
3	!	528.2458	55.52	-14.43	41.09	47.00	-5.91	peak		
4	*	576.6443	56.78	-13.70	43.08	47.00	-3.92	peak		
5	!	601.4265	55.00	-13.25	41.75	47.00	-5.25	peak		
6		625.0778	53.06	-12.89	40.17	47.00	-6.83	peak		

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

PASS

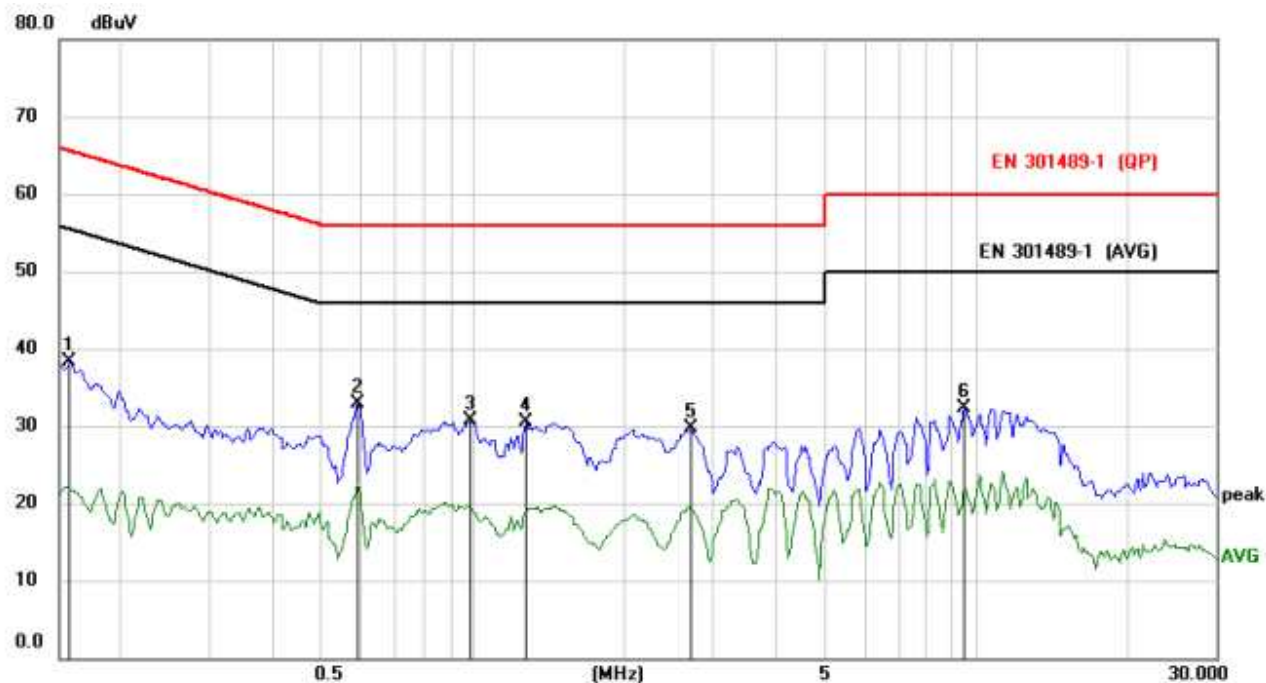


Test mode:

Mode 1

Polarization

L



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1578	27.40	10.93	38.33	65.58	-27.25	peak	
2	*	0.5907	21.94	10.92	32.86	56.00	-23.14	peak	
3		0.9846	19.75	10.92	30.67	56.00	-25.33	peak	
4		1.2693	19.58	10.94	30.52	56.00	-25.48	peak	
5		2.7084	18.63	11.00	29.63	56.00	-26.37	peak	
6		9.4895	20.95	11.33	32.28	60.00	-27.72	peak	

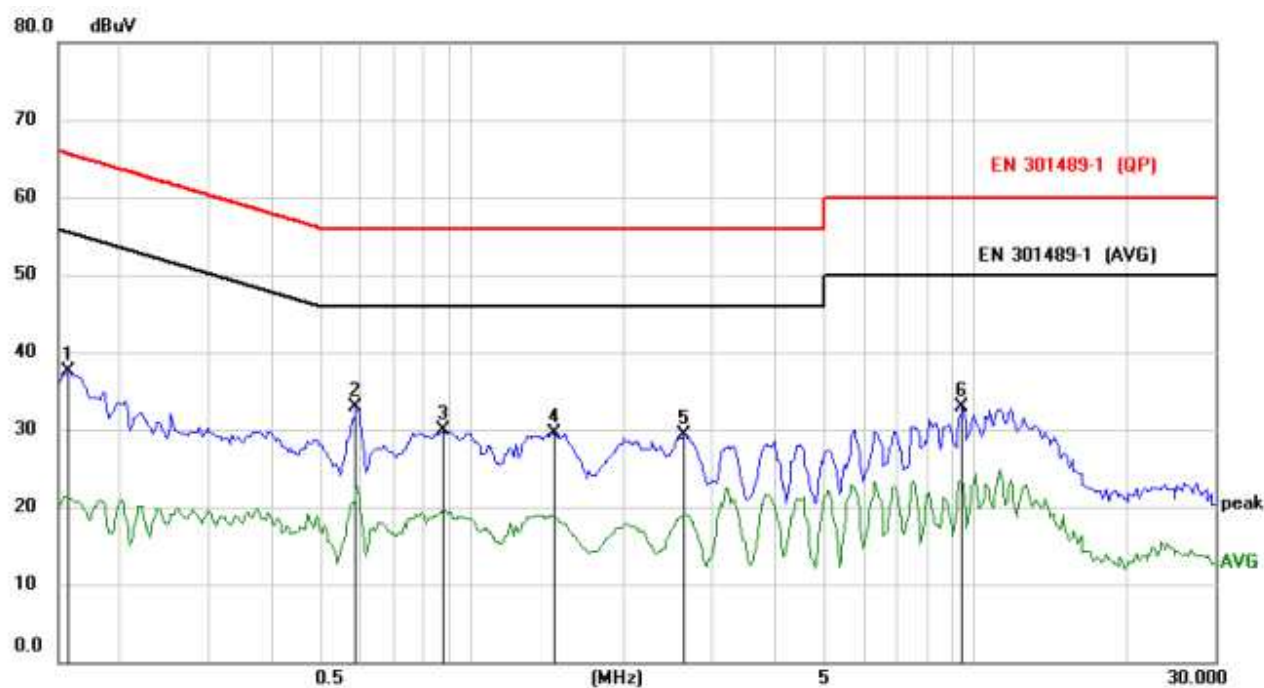


Test mode:

Mode 1

Polarization

N



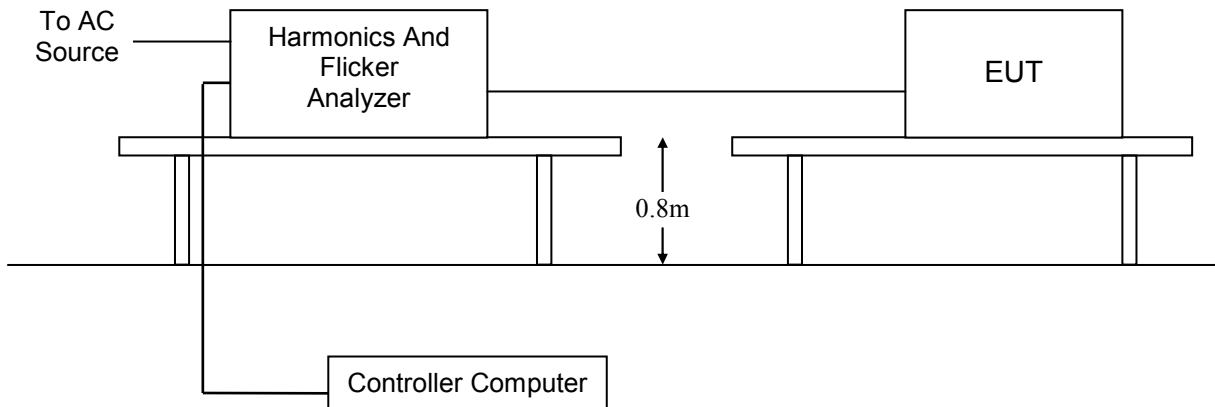
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1578	26.65	10.93	37.58	65.58	-28.00	peak	
2	*	0.5868	21.98	10.92	32.90	56.00	-23.10	peak	
3		0.8754	18.89	10.92	29.81	56.00	-26.19	peak	
4		1.4487	18.58	10.94	29.52	56.00	-26.48	peak	
5		2.6460	18.26	11.00	29.26	56.00	-26.74	peak	
6		9.4389	21.54	11.33	32.87	60.00	-27.13	peak	

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

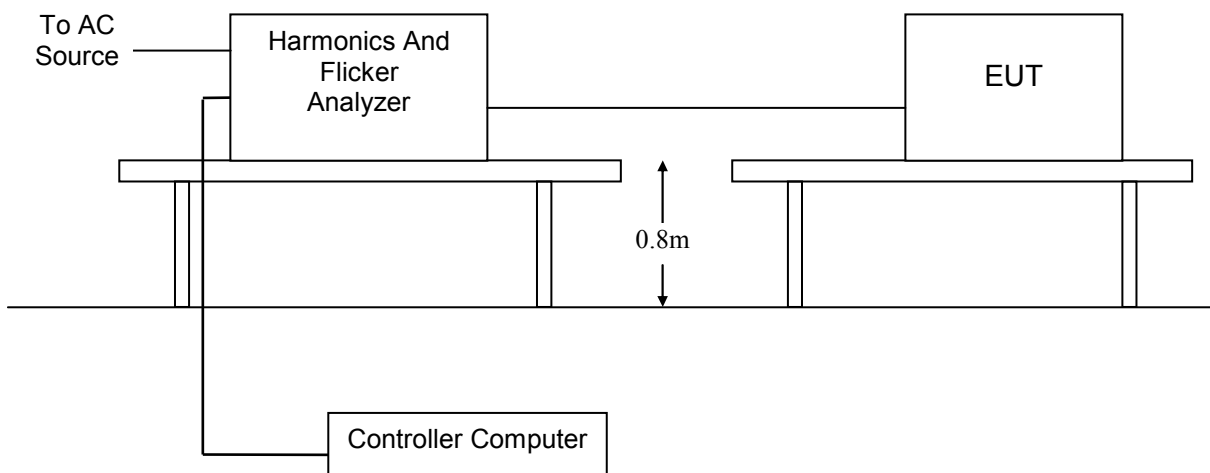
Note: The active input power of the EUT is less than 75W. No limits apply for equipment with an active input power up to and including 75W

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

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+A1:2019, 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.

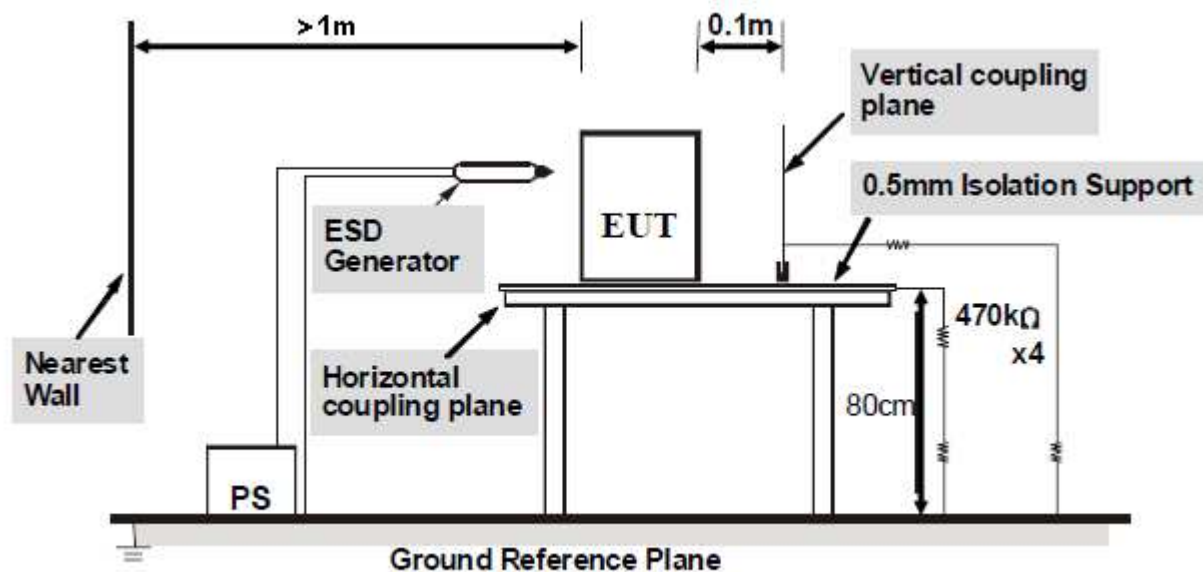
4.2.2. Electrostatic Discharge

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 0.5m X 0.5m, 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

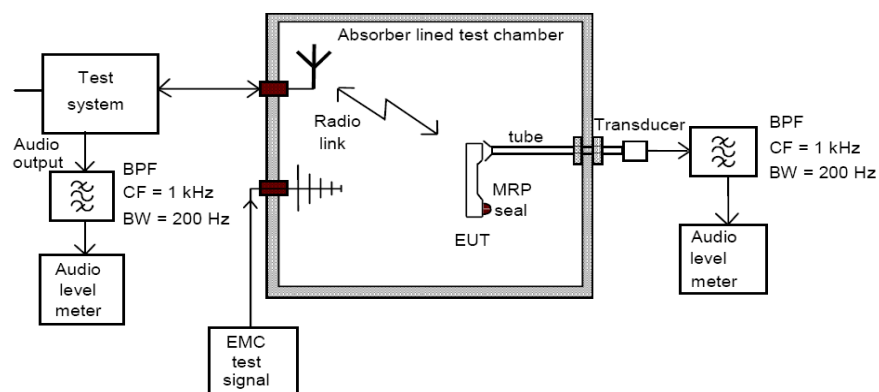
PERFORMANCE CRITERION

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

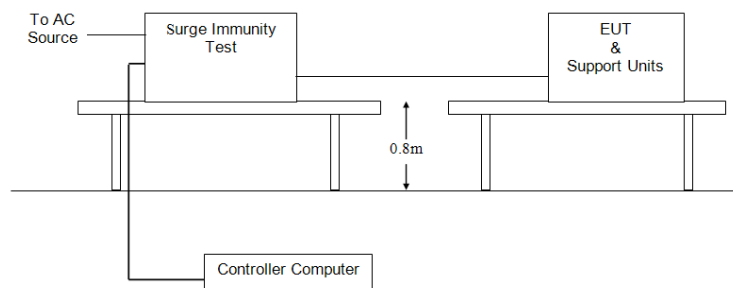
TEST LEVEL

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

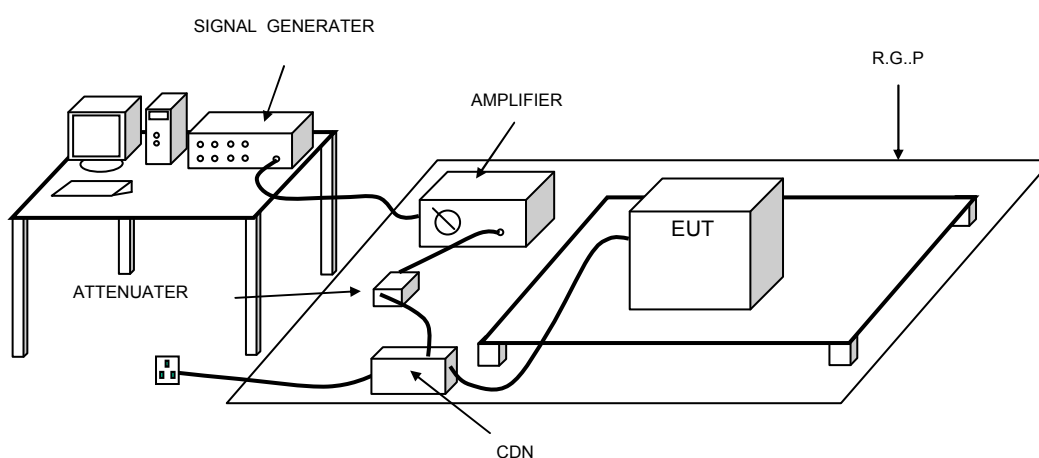
PERFORMANCE CRITERION

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

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

4.2.6. Fast Transients Common Mode

PERFORMANCE CRITERION

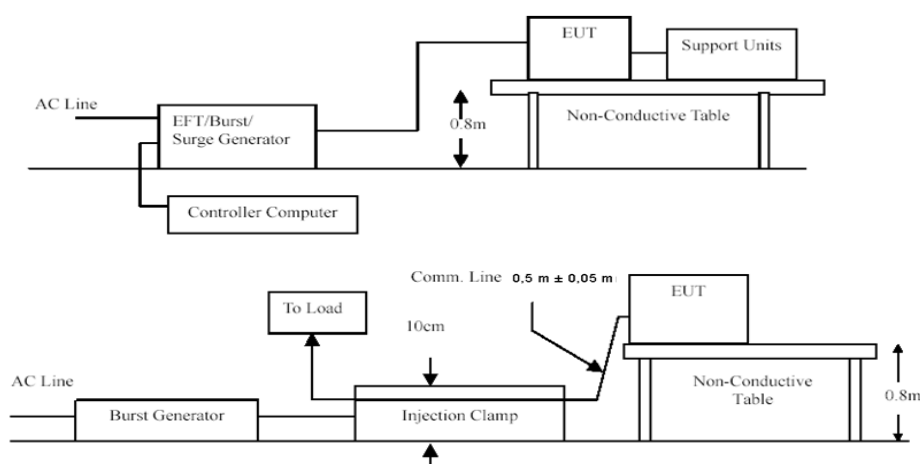
Criteria B

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

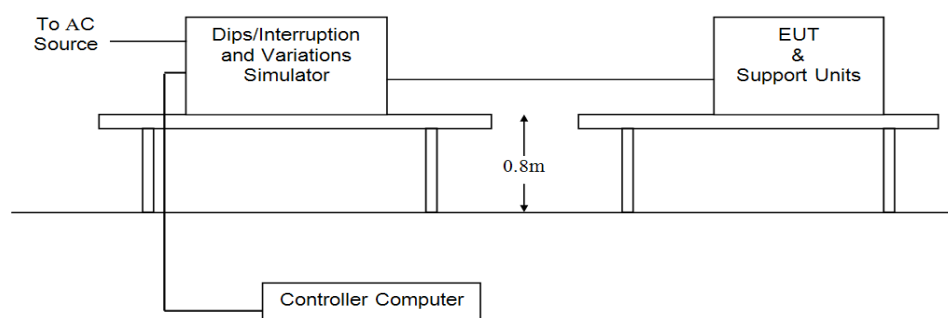
0% of VT(Supply Voltage) for 0.5 period

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



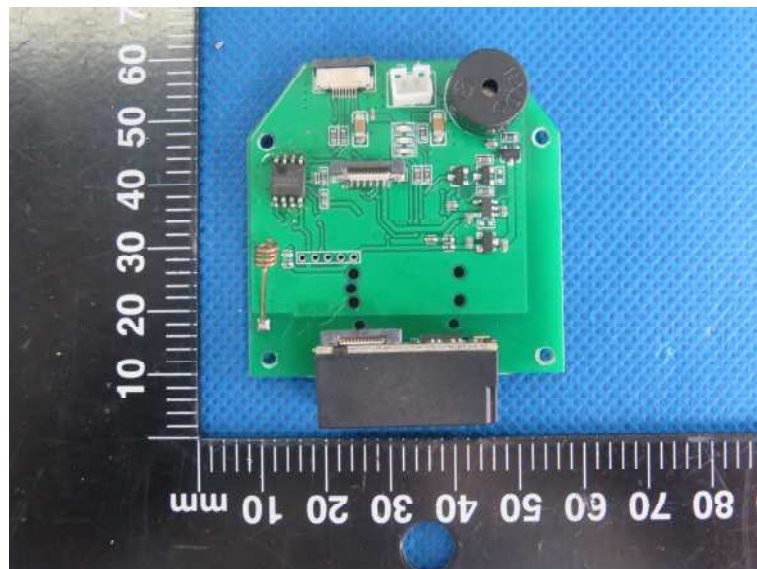
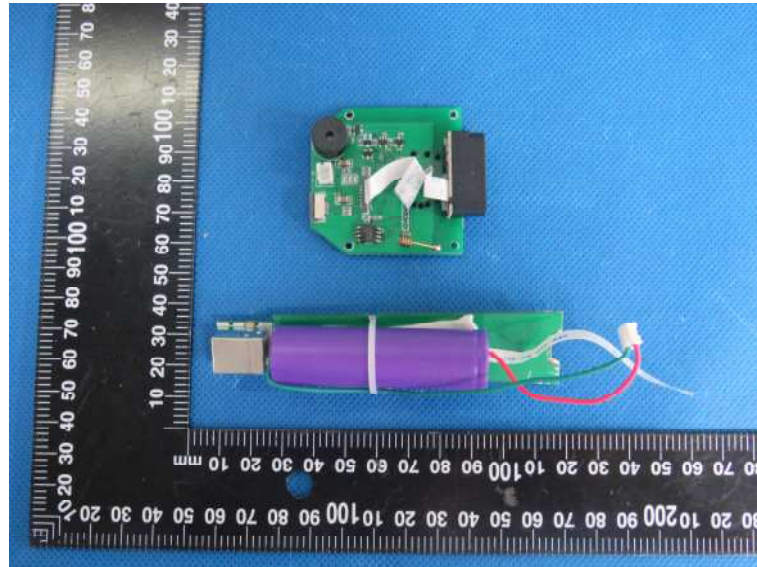


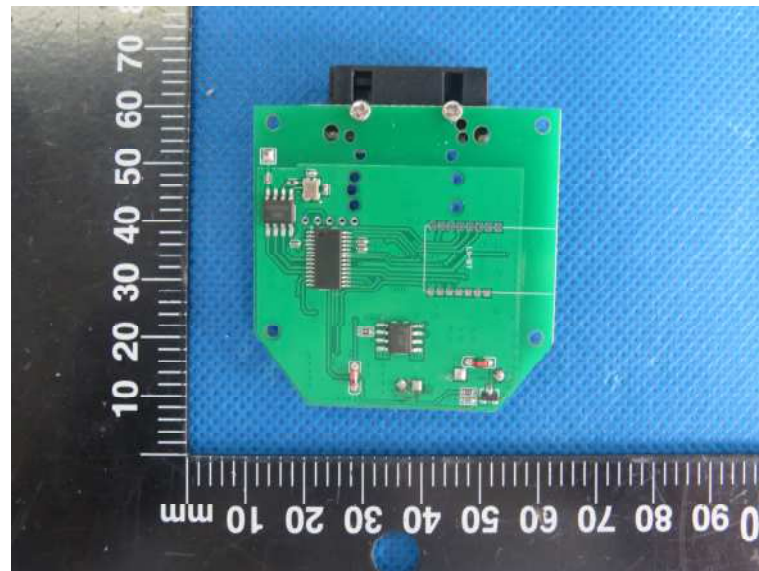
6. External and Internal Photos of the EUT

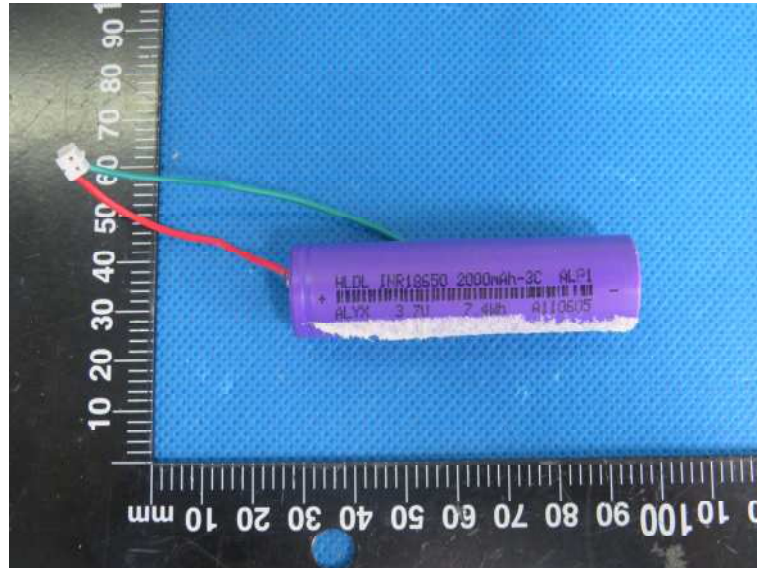












.....End of Report.....