

# **CE EMC Test Report**



(Declaration of Conformity)

For

Electromagnetic compatibility

Of

Product: LED desk lamp

Trade Mark: N/A

Model Number: A9, A8, A7, A6

### Prepared for

Shenzhen DSY Electronic Technology Co., Ltd.

6th floor, Building 7, Cuigang District 3, Fuyong Street, Baoan District, Shenzhen city,
Guangdong province, China

#### Prepared by

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Tel.: 400-800-6106, 0755-3699 5508 Website: http://www.ntek.org.cn

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# **TEST RESULT CERTIFICATION**

Applicant's Name	Shenzhen DSY Electronic Technology Co., Ltd.
Address:	6th floor, Building 7, Cuigang District 3, Fuyong Street, Baoan
Addicas	District, Shenzhen city, Guangdong province, China
Manufacturer's Name:	Shenzhen DSY Electronic Technology Co., Ltd.
Address:	6th floor, Building 7, Cuigang District 3, Fuyong Street, Baoan District, Shenzhen city, Guangdong province, China
Product description	4 4 4 4 4 4 6
Product name:	LED desk lamp
Model and/or type reference:	A9, A8, A7, A6
Standards:	EN IEC 55015:2019+A11:2020 EN 61547:2009
	ced except in full, without the written approval of NTEK, this vised by NTEK, personal only, and shall be noted in the revision of
Date of Test	
Date (s) of performance of tests	03 Nov. 2020 ~ 12 Dec. 2020
Date of Issue	12 Dec. 2020
Test Result	
at at at at	et et et et et et et
Testing Engine	eer : Zabelle. Chen
* * * * * *	(Estelle Chen)
Technical Mar	of of a state of of
2 2 2 4	(Sky Zhang)
Authorized Sig	gnatory: Aless
* * * *	(Alex)

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# 1. TEST SUMMARY

Test procedures according to the technical standards:

		EMC Emission				
Standard		Test Item	Limit	Judgment	Remark	
F. 15 5	at and	Conducted Emission	on_	7	N/A	4
EN IEC 55015:2019	+A11:2020	Radiated Emission	Radiated Emission			711
		EMC Immunity				
Section EN 61547:2009	Test Item			ormance Criteria	Judgment	Remark
EN 61000-4-2	Electr	ostatic Discharge		В	PASS	4
EN 61000-4-3	RF ele	ectromagnetic field	0	A	PASS	10
EN 61000-4-4	* ~ 1	ast transients	4	В	N/A	4
EN 61000-4-5		Surges	>	C	N/A	N. IA
EN 61000-4-6	di di	to	A	N/A	t	
EN 61000-4-8	Power Fre	ج حاد	A	N/A	1	
EN 61000-4-11	Volt. Inte	erruptions Volt. Dips	0	в/С	N/A	10

# NOTE:

- (1) "N/A" denotes test is not applicable in this Test Report.
- (2) For client's request and manual description, the test will not be executed.

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## 1.1 TEST FACILITY

Shenzhen NTEK Testing Technology Co., Ltd.

Add.: 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street Bao'an District,

Shenzhen 518126 P.R. China

CNAS-Lab. : The Laboratory has been assessed and proved to be in compliance

with CNAS-CL01:2018 (identical to ISO/IEC 17025:2017)

The Certificate Registration Number is L5516

IC-Registration : The Certificate Registration Number is CN0074

FCC- Accredited : Test Firm Registration Number: 463705

Designation Number: CN1184

A2LA-Lab. : The Certificate Registration Number is 4298.01

This laboratory is accredited in accordance with the recognized

International Standard ISO/IEC 17025:2017 General requirements for

the competence of testing and calibration laboratories.

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system

(refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

#### 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $\mathbf{y} \pm \mathbf{U}$ , where expended uncertainty  $\mathbf{U}$  is based on a standard uncertainty multiplied by a coverage factor of  $\mathbf{k=2}$ , providing a level of confidence of approximately 95 %.

Test Item	Measurement Frequency Range	К	U(dB)
AC Mains Conducted Emission	0.009kHz ~ 0.15MHz	2	2.66
AC Mains Conducted Emission	0.15MHz ~ 30MHz	2	2.80
Telecom Conducted Emission (Cat 3)	0.15MHz ~ 30MHz	2	2.40
Telecom Conducted Emission (Cat 5)	0.15MHz ~ 30MHz	2	2.58
Radiated Emission	30MHz ~ 1000MHz	2	2.64
Radiated Emission	1000MHz ~ 6000MHz	2	5.10
Radiated Emission	6000MHz ~ 18000MHz	2	2.52
Power Clamp	30MHz ~ 300MHz	2	2.20

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# **Revision History**

	-0	Report No.			eport No. Version Description		.0	Issu	ed Date		
	S20	110300	901001	-	Rev.01	S 1	nitial iss	ue of rep	oort	Dec.	12, 2020
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	-	-	1	-	1		1	-	1	-	-

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# 2. GENERAL INFORMATION

# 2.1 GENERAL DESCRIPTION OF EUT

Equipment	LED desk lamp					
Model Name	A9					
Additional Model Number(s)	A8, A7, A6					
Model Difference	All models are identical except model's name.					
	The EUT is a LED desk lamp.					
	Operating frequency: N/A					
	Connecting I/O port: N/A					
Product Description	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an LED Lighting Device. More details of EUT technical specification, please refer to the User's Manual.					
Power Source	DC Voltage					
Power Rating	DC 5V powered by Micro USB port or DC 3.7V, 120mAh powered by Battery					

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### 2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

All test modes in the table below are tested, the worst case is listed on this report.

Pretest Mode	Description
Mode 1	Charging + Lighting(Brightest / Darkest)

For Radiated Test					
Final Test Mode	Description				
Mode 1	Charging + Lighting(Brightest / Darkest)				

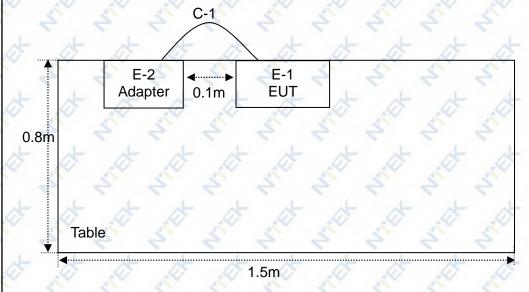
For EMS Test					
Final Test Mode Description					
Mode 1 Charging + Lighting(Brightest / Darkest)					

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### 2.3 DESCRIPTION OF TEST SETUP

Mode RE : Charging + Lighting(Brightest)



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### 2.4 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Brand	Model/Type No.	Series No.	Note
E-1	LED desk lamp	N/A	A9	N/A	EUT
E-2	Adapter	N/A	KSA29B0500200D5	N/A	4
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, t	& 318 318t	Side Side	- 10t 310t 310t	SOF SOF	sid .
¥.	* * *	* *	- * * *	* *	*

Item	Shielded Type	Ferrite Core	Length	Note
C-1	ONO O	NO	120cm	0 0 0
3		1 2 2	2 2 2	
*	* * *	* * *		* * *
1				
	7 7 7			
		A A A		D D D

### Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in <code>"Length\_"</code> column.
- (3) "YES" means "shielded" "with core"; "NO" means "unshielded" "without core".

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# 2.5 MEASUREMENT INSTRUMENTS LIST

# 2.5.1 RADIATED TEST SITE

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Antenna Mast	SKET	N/A	N/A	N/A	N/A	N/A
2	Antenna Mast	EM	SC100	N/A	N/A	N/A	N/A
3	50Ω Switch	Anritsu	MP59B	6200983705	May 11, 2020	May 10, 2023	3 years
4	Test Cable	N/A	R-01	N/A	Aug. 06, 2019	Aug. 05, 2022	3 years
5	Test Cable	N/A	R-03	N/A	Jun. 28, 2019	Jun. 27, 2022	3 years
6	EMI Test Receiver	R&S	ESCI	101160	May 11, 2020	May 10, 2021	1 year
7	Bilog Antenna	TESEQ	CBL6111D	31216	Apr. 11, 2020	Apr. 10, 2021	1 year
8	Low Noise Amplifier	B&Z	BZ-P540-5508 50-452727	16476-11729	Apr. 15, 2020	Apr. 14, 2021	1 year
9	Spectrum Analyzer	Agilent	E4440A	MY41000130	May 11, 2020	May 10, 2021	1 year
10	Broadband Horn Antenna	EM	EM-AH-10180	2011071402	Apr. 08, 2018	Apr. 07, 2021	3 years
11	50Ω Switch	Anritsu	MP59B	6200983704	May 11, 2020	May 10, 2023	3 years
12	Triple Loop Antenna	EVERFINE	LLA-2	11020003	Jul. 13, 2020	Jul. 12, 2021	1 year

#### 2.5.2 ESD

_	_:0:							
4	Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
	1	ESD TEST GENERATOR	Lioncel	ESD-203B	ESD203B015 0402	Aug. 07, 2020	Aug. 06, 2021	1 year

# 2.5.3 RS

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
۴- ۲	3M Fully Anechoic Room	N/A	8*4*4	N/A	Aug. 07, 2020	Aug. 06, 2023	3 years
2	Power Amplifier	rflight	NTWPA-0081 0200	17063153	Jul. 13, 2020	Jul. 12, 2021	1 year
3	PSG Analog Signal Generator	Agilent	E8257D	MY51110112	Jul. 13, 2020	Jul. 12, 2021	1 year
4	Broadband Amplifier	AR	60S1G6	0350414	Apr. 07, 2020	Apr. 06, 2021	1 year
5	RF Test System Controller	AR	SC1000	0350156	Jan. 12, 2018	Jan. 11, 2021	3 years
6	Bilog Antenna	ETS	3142E	00214344	Dec. 21, 2019	Dec. 20, 2020	1 year

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#### 3. EMC EMISSION TEST

### 3.1 RADIATED EMISSION MEASUREMENT

#### 3.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT (Below 1000MHz)

<	FREQUENCY (MHz)		☐ 3m	☐ 4m		
	FREQUENCT (MITZ)	dB(μA)	dB(μA)	dB(μA)		
4	9kHz ~ 70kHz	88	81	75		
	70kHz ~ 150kHz	88 to 58	81 to 51	75 to 45		
	150kHz ~ 3MHz	58 to 22	51 to 15	45 to 9		
	3MHz ~ 30MHz	22	15 to 16	9 to 12		

(		☐At 10m	⊠At 3m			
	FREQUENCY (MHz)	dBµV/m	dBµV/m			
4	30 - 230	30	40			
	230 - 1000	37	47			

#### Notes:

- (1) The limit for radiated test was performed according to as following: CISPR 15.
- (2) The tighter limit applies at the band edges.
- (3) Emission level  $(dB\mu V/m) = 20log$  Emission level (uV/m)

#### 3.1.2 TEST PROCEDURE

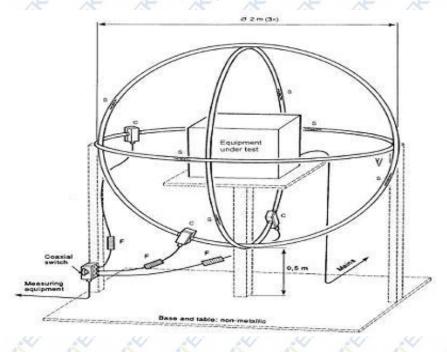
- a. The measuring distance of at 3m shall be used for measurements at frequency up to 1GHz.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna 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.
- d. 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 detector mode re-measured, above 1G Average detector mode will be instead.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP(AV) Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item -EUT Test Photos.

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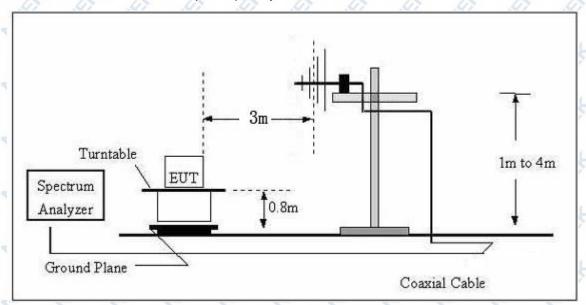


### 3.1.3 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 30 MHz



(B) Radiated Emission Test Set-Up Frequency Above 30 MHz



# 3.1.4 EUT OPERATING CONDITIONS

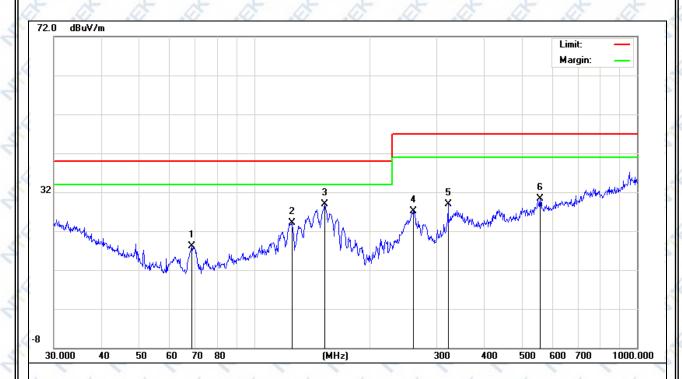
The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.

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# 3.1.5 TEST RESULTS (30-1000MHz)

EUT:	LED desk lamp	Model Name:	A9 /						
Temperature:	23℃	Relative Humidity:	54%						
Pressure:	1010hPa	Test Date:	2020-12-07						
Test Mode:	Charging + Lighting(Darkest)	Polarization:	Horizontal						
Test Power: DC 5V powered by Adapter AC 230V/50Hz									



No.	Mk.	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		68.8721	11.99	6.13	18.12	40.00	-21.88	QP			
2		125.4457	11.98	12.19	24.17	40.00	-15.83	QP			
3	*	152.6641	17.04	11.82	28.86	40.00	-11.14	QP			
4		260.1444	12.23	14.96	27.19	47.00	-19.81	QP			
5		321.0608	13.73	15.09	28.82	47.00	-18.18	QP			
6		558.7302	7.96	22.38	30.34	47.00	-16.66	QP			

### Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.

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A A		A A A	At At At					
EUT:	LED desk lamp	Model Name:	A9					
Temperature:	23℃	Relative Humidity:	54%					
Pressure:	1010hPa	Test Date:	2020-12-07					
Test Mode:	Charging + Lighting(Darkest)	Polarization:	Vertical					
Test Power:	DC 5V powered by Adapter AC 230V/50Hz							



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	33.2112	18.27	17.50	35.77	40.00	-4.23	QP			
2		63.9828	23.60	6.30	29.90	40.00	-10.10	QP			
3		69.1140	22.85	6.19	29.04	40.00	-10.96	QP			
4		125.4457	20.84	12.19	33.03	40.00	-6.97	QP			
5		153.2004	22.04	11.79	33.83	40.00	-6.17	QP			
6		262.8955	9.45	14.63	24.08	47.00	-22.92	QP			

### Remark:

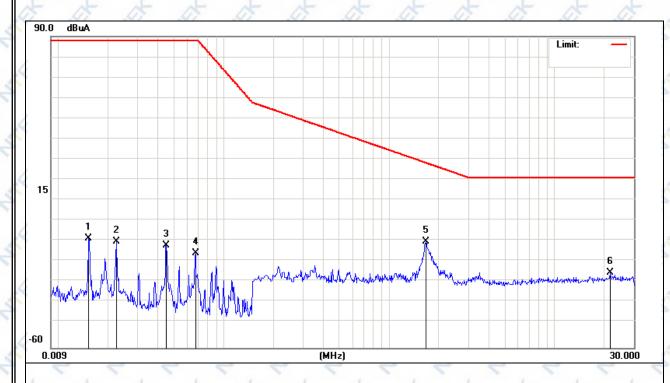
Factor = Antenna Factor + Cable Loss - Amplifier.

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# 3.1.6 TEST RESULTS (0.009-30MHz)

EUT:	LED desk lamp	Model Name:	A9					
Temperature:	20℃	Relative Humidity:	45%					
Pressure:	1010hPa	Test Date:	2020-12-08					
Test Mode:	Charging + Lighting(Brightest)	Polarization:	X V					
Test Power: DC 5V powered by Adapter AC 230V/50Hz								



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1	0.0153	-7.37	0.01	-7.36	88.00	-95.36	QP	
2	0.0225	-8.82	0.02	-8.80	88.00	-96.80	QP	
3	0.0449	-10.65	0.03	-10.62	88.00	-98.62	QP	
4	0.0674	-14.50	0.05	-14.45	88.00	-102.45	QP	
5 *	1.6700	-9.30	0.35	-8.95	29.04	-37.99	QP	
6	21.6660	-24.33	0.63	-23.70	22.00	-45.70	QP	

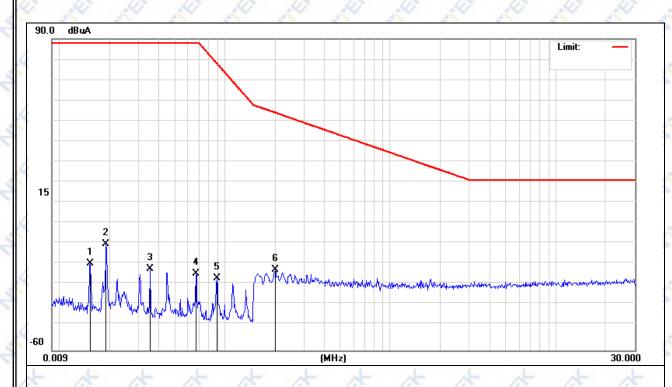
#### Remark:

Factor = Antenna Factor + Cable Loss.

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* * *		* * *	* * *				
EUT:	LED desk lamp	Model Name:	A9				
Temperature:	20℃	Relative Humidity:	45%				
Pressure:	1010hPa	Test Date:	2020-12-08				
Test Mode:	Charging + Lighting(Brightest)	Polarization: Y					
Test Power:	DC 5V powered by Adapter AC 230V/50Hz						



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
	MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment	
1	0.0154	-18.34	0.01	-18.33	88.00	-106.33	QP		
2	0.0192	-8.74	0.01	-8.73	88.00	-96.73	QP		
3	0.0354	-20.84	0.02	-20.82	88.00	-108.82	QP		
4	0.0670	-23.07	0.05	-23.02	88.00	-111.02	QP		
5	0.0894	-25.39	0.07	-25.32	78.36	-103.68	QP		
6 *	0.2020	-21.33	0.10	-21.23	54.42	-75.65	QP		

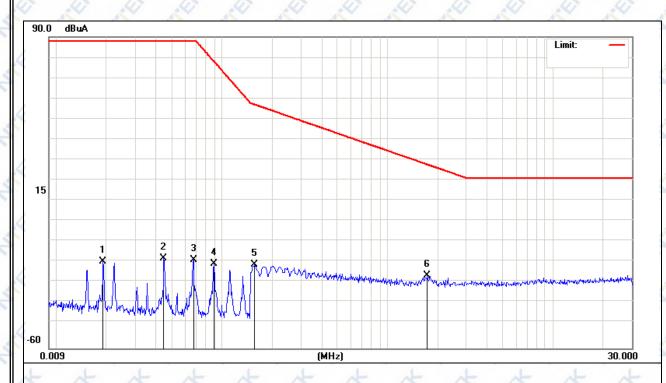
### Remark:

Factor = Antenna Factor + Cable Loss.

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A A		* * *	
EUT:	LED desk lamp	Model Name:	A9
Temperature:	20℃	Relative Humidity:	45%
Pressure:	1010hPa	Test Date:	2020-12-08
Test Mode:	Charging + Lighting(Brightest)	Polarization:	ZS S S
Test Power:	DC 5V powered by Adapter AC	230V/50Hz	At At At



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1	0.0192	-18.19	0.01	-18.18	88.00	-106.18	QP	
2	0.0448	-16.75	0.03	-16.72	88.00	-104.72	QP	
3	0.0673	-17.65	0.05	-17.60	88.00	-105.60	QP	
4	0.0897	-19.45	0.07	-19.38	78.23	-97.61	QP	
5	0.1580	-19.76	0.10	-19.66	57.37	-77.03	QP	
6 *	1.7540	-25.15	0.36	-24.79	28.45	-53.24	QP	

### Remark:

Factor = Antenna Factor + Cable Loss.

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# 4. EMC IMMUNITY TEST

# 4.1 STANDARD COMPLIANCE/SEVERITY LEVEL/CRITERIA

		and the second second	arrest arrest		
Tests	TEST SPECIFICATION	Test Mode	Perform.		
Standard No.	Level	Test Ports	Criteria		
1. ESD	8kV air discharge 4kV contact discharge	Direct Mode	B		
IEC/EN 61000-4-2	4kV HCP discharge 4kV VCP discharge	Indirect Mode	BA		
2. RS IEC/EN 61000-4-3	80 MHz to 1000 MHz 1000Hz, 80%, AM modulated	Enclosure	A		

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# 4.2 GENERAL PERFORMANCE CRITERIA

According to EN 61547 standard, the general performance criteria as following:

	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
Criterion A	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.
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. The performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is allowed. However, no change of operating state or stored data is allowed to persist after the test.
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. Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

# 4.3 GENERAL PERFORMANCE CRITERIA TEST SETUP

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

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### 4.4 ESD TESTING

# 4.4.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-2
Discharge Impedance:	330ohm / 150pF
Required Performance:	BHHHH
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. 20 times at each test
	point
Discharge Mode:	Single Discharge
Discharge Period:	1 second minimum

#### 4.4.2 TEST PROCEDURE

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

a. Indirect application of the discharge:

Vertical Coupling Plane (VCP):

At least 10 single discharges (in the most sensitive polarity) shall be applied to the centre 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 0.1 m from, the EUT.

Discharges shall be applied to the coupling plane, with sufficient different positions such that the four faces of the EUT are completely illuminated. One VCP position is considered to illuminate  $0.5 \text{ m} \times 0.5 \text{ m}$  area of the EUT surface.

Horizontal Coupling Plane (HCP):

Discharge to the HCP shall be made horizontally to the edge of the HCP.

At least 10 single discharges (in the most sensitive polarity) shall be applied at the front edge of each HCP opposite the centre point of each unit (if applicable) of the EUT and 0.1m from the front of the EUT. The long axis of the discharge electrode shall be in the plane of the HCP and perpendicular to its front edge during the discharge.

The discharge electrode shall be in contact with the edge of the HCP before the discharge switch is operated

b. Direct application of discharges to the EUT

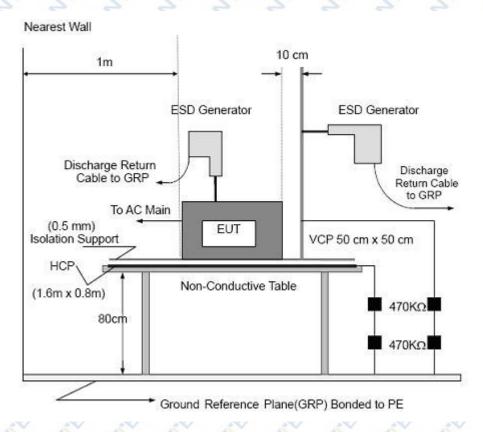
The test shall be performed with single discharges. On each pre-selected point at least 10 single discharges (in the most sensitive polarity) shall be applied.

For the time interval between successive single discharges an initial value of 1 s is recommended. Longer intervals may be necessary to determine whether a system failure has occurred.

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#### 4.4.3 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 of 0.1-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.

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# 4.4.4 TEST RESULTS

EUT:	LED desk lamp	Model Name:	A9 /- /-
Temperature:	22°C	Relative Humidity:	52%
Pressure:	1010hPa	Test Date:	2020-12-07
Test Mode:	Charging + Lighting(Brightest /	Darkest)	
Test Power:	DC 5V powered by Adapter AC	230V/50Hz / DC 3.7	7V powered by Battery

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	Mode	Co								
Test level(kV)		Test Point	:	2	4	4	6		Criterion	Result
	Test Location	rest Point	+	-	+	-	+	-		
4	T TO	Front	P	Р	P	Р	7	0	D 10	1
	Z Z	Rear	Р	Р	P	P	1		7, 4,	4 4
4	⊢ HCP	Left	P	P	P	Р			A P	F ACT
	4 4	Right	Р	Р	P	P	7	-	→B	Complies
4		Front	Р	Р	P	P		0	A STATE OF	Compiles
,	1 - Vot	Rear	Р	P	P	Р	7	4	7 - 7	F 7 5
VCP	Left	Р	Р	P	Р	7	4	540 SA	100	
1	t t	Right	P	P	Р	P	+	×	*	上、大

Mode			Air	Dis	cha	rge				С	onta	ct [	Disc	har	ge			
Test level(kV)	2	2	4	4	8	3	1	5	2	2	4	1	(	6	8	3	Criterion	Result
Test Location	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-		
Gap	Р	Р	Р	P	Р	Р	1		1		7	1		1	-	1.		2 4
Button	Р	Р	Р	Р	P	Р	4	×		d		4	0	_<	×		d- d	- ot
Micro USB port	Р	P	Р	Р	Р	Р	1/1/2		1.	,	A.			1		1.	B	Complies
Screw	25	1			100	4.	N. Carlotte	7	Р	Ъ	Р	P		1	3	4	0 ,0	AT.

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#### Note:

- 1) +/- denotes the Positive/Negative polarity of the output voltage.
- 2) In the table: 'P' represents 'PASS'; 'F' represents 'FAIL'.
- 3) Criteria A: Normal performance within limits specified by the manufacturer, requestor or purchaser.
- 4) Criteria B: Temporary loss of function or degradation of performance which ceases after the disturbance ceases, and from which the EUT recovers its normal performance, without operator intervention.
- 5) Criteria C: Temporary loss of function or degradation of performance, the correction of which requires operator intervention.
- 6) Criteria D: Loss of function or degradation of performance which is not recoverable, owing to damage to hardware or software, or loss of data.

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### 4.5 RS TESTING

# 4.5.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-3
Required Performance:	A A A A A A A
Frequency Range:	80 MHz - 1000 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:	3 m x x x x x x
Antenna Height:	1.5 m
Dwell Time:	3 seconds

### 4.5.2 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.

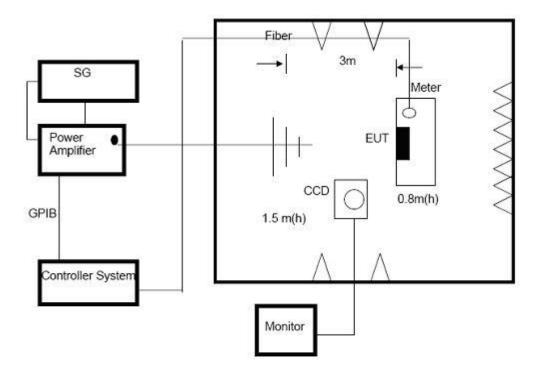
The other condition as following manner:

- a. The frequency range is swept from 80 MHz to 1000 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.
- b. Sweep Frequency 900 MHz, with the Duty Cycle:1/8 and Modulation: Pulse 217 Hz(if applicable)
- 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.

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### 4.5.3 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.

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# 4.5.4 TEST RESULTS

EUT:	LED desk lamp	Model Name:	A9 /
Temperature:	25℃	Relative Humidity:	40%
Pressure:	1010hPa	Test Date:	2020-12-08
Test Mode:	Charging + Lighting(Brightest /	Darkest)	10 10 10
Test Power:	DC 5V powered by Adapter AC	230V/50Hz / DC 3.7	7V powered by Battery

				1 6/1	6/1	1 6/1	9//	
	Frequency Range	RF Field	R.F.	Azimuth	Perform.	Results	ludamont	
/	Frequency Kange	Position	Field Strength	Azimum	Criteria	Results	Judgment	
X		- Z-14	712 71	Front	7.0	1	1	
4	80MHz - 1000MHz	H/V	3 V/m (r.m.s) AM Modulated	Rear	A	Print	Complies	
4	- Todowii iz	et e	1000Hz, 80%	Left	et de	y d	- At	
1	+ + + +	* >	+ + + 1	Right	* 1	4 4	14	

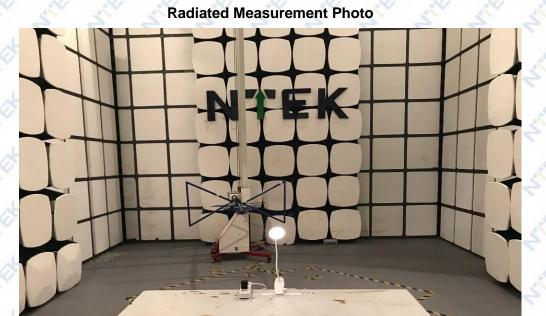
# Note:

- 1) N/A denotes test is not applicable in this test report.
- 2) In the table: 'P' represents 'PASS'; 'F' represents 'FAIL'.
- 3) Criteria A: There was no change operated with initial operating during the test.
- 4) Criteria B: The EUT function loss during the test, but self-recoverable after the test.
- 5) Criteria C: The system shut down during the test.

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# 5. EUT TEST PHOTO





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# ATTACHMENT PHOTOGRAPHS OF EUT

Photo 1



Photo 2



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Photo 4



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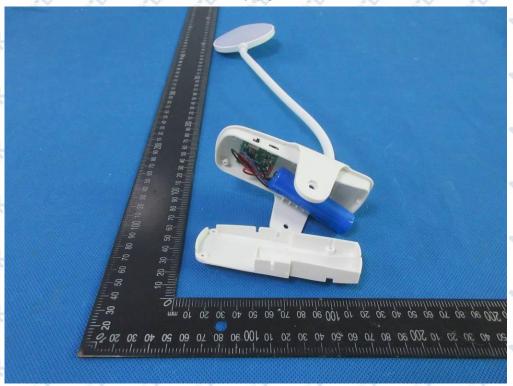
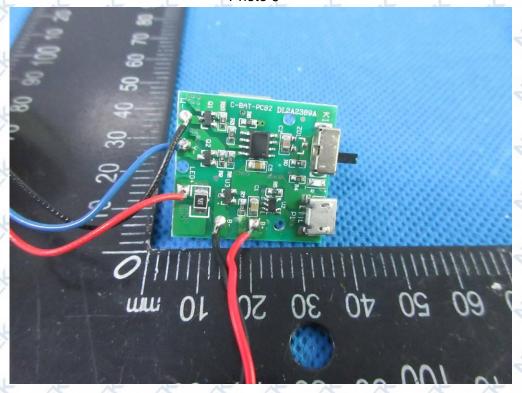


Photo 6

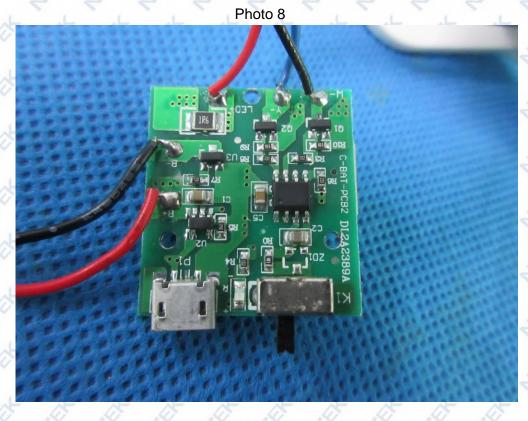


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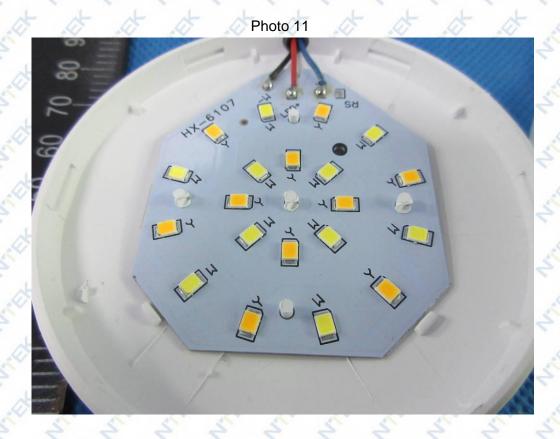






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