

### Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

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Report Reference No...... CTA22030900201 FCC ID...... 2A2GS-DJ06

Compiled by

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kerm. Lin

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Apr. 11, 2022

Date of issue...... Apr. 11, 2022

Representative Laboratory Name.: Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,

Fuhai Street, Bao'an District, Shenzhen, China

Applicant's name...... Dongguan Jianbing Machinery Equipment Co. , Ltd

Building 2, phase II, zhongchuanghui Intelligent Manufacturing

Address.....: Industrial Park, Jinqu Road, Wanjiang street, Dongguan City,

**Guangdong Province** 

Test specification....:

FCC Rules and Regulations Part 15 Subpart C (Section 15.209),

ANSI C63.10: 2013

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Test item description.....: Portable wireless charging desk lamp

Trade Mark.....: N/A

Manufacturer...... Dongguan Jianbing Machinery Equipment Co. , Ltd

Model/Type reference.....: DJ06

Modulation Type.....: ASK

Operation Frequency.....: From 110KHz~205KHz

Input: DC 5V From External circuit or 3.7V from battery

USB output port: 5V2A, 10W

Result..... PASS

Report No.: CTA22030900201 Page 2 of 24

# TEST REPORT

CTATESTING Equipment under Test Portable wireless charging desk lamp

DJ06 Model /Type

DJ06-1, DJ06-2, DJ06-3, DJ06-4, DJ06-5, DJ06-6, DJ06-7, DJ06-8 Listed Models

CTATESTING PCB board, structure and internal of these model(s) are the same, Model Declaration

So no additional models were tested.

**Applicant** Dongguan Jianbing Machinery Equipment Co., Ltd

Building 2, phase II, zhongchuanghui Intelligent Manufacturing Industrial Park, Jinqu Road, Waniiang street Dengary Address

**Guangdong Province** 

Dongguan Jianbing Machinery Equipment Co., Ltd Manufacturer

Building 2, phase II, zhongchuanghui Intelligent Manufacturing Address

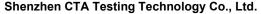
Industrial Park, Jinqu Road, Wanjiang street, Dongguan City,

**Guangdong Province** 

Test Result:	PASS
	23 over

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**

2       SUMMARY       5         2.1       General Remarks       5         2.2       Product Description       5         2.3       Description of the test mode       5         2.4       Special Accessories       5         2.5       Modifications       5         3       TEST ENVIRONMENT       6         3.1       Address of the test laboratory       6         3.2       Test Facility       6         3.3       Environmental conditions       6         3.4       Summary of measurement results       7         3.5       Statement of the measurement uncertainty       7         3.6       Equipments Used during the Test       8         4       TEST CONDITIONS AND RESULTS       9         4.1       AC Power Conducted Emission       9         4.2       Radiated Emission       9         4.2       Radiated Emission       12         4.3       The 20dB bandwidth       16         4.4       Antenna Requirement       17         5       TEST SETUP PHOTOS OF THE EUT       18		CTATE		4
3.1 Address of the test laboratory 3.2 Test Facility 3.3 Environmental conditions 3.4 Summary of measurement results 3.5 Statement of the measurement uncertainty 3.6 Equipments Used during the Test  4 TEST CONDITIONS AND RESULTS  4.1 AC Power Conducted Emission 4.2 Radiated Emission 4.3 The 20dB bandwidth 4.4 Antenna Requirement  5 TEST SETUP PHOTOS OF THE EUT	2	SUMMARY	- 17551	5
3.1 Address of the test laboratory 3.2 Test Facility 3.3 Environmental conditions 3.4 Summary of measurement results 3.5 Statement of the measurement uncertainty 3.6 Equipments Used during the Test  4 TEST CONDITIONS AND RESULTS  4.1 AC Power Conducted Emission 4.2 Radiated Emission 4.3 The 20dB bandwidth 4.4 Antenna Requirement  5 TEST SETUP PHOTOS OF THE EUT	2.1	Gonoral Romarks	CANCILL	E
3.1 Address of the test laboratory 3.2 Test Facility 3.3 Environmental conditions 3.4 Summary of measurement results 3.5 Statement of the measurement uncertainty 3.6 Equipments Used during the Test  4 TEST CONDITIONS AND RESULTS  4.1 AC Power Conducted Emission 4.2 Radiated Emission 4.3 The 20dB bandwidth 4.4 Antenna Requirement  5 TEST SETUP PHOTOS OF THE EUT				5
3.1 Address of the test laboratory 3.2 Test Facility 3.3 Environmental conditions 3.4 Summary of measurement results 3.5 Statement of the measurement uncertainty 3.6 Equipments Used during the Test  4 TEST CONDITIONS AND RESULTS  4.1 AC Power Conducted Emission 4.2 Radiated Emission 4.3 The 20dB bandwidth 4.4 Antenna Requirement  5 TEST SETUP PHOTOS OF THE EUT				5
3.1 Address of the test laboratory 3.2 Test Facility 3.3 Environmental conditions 3.4 Summary of measurement results 3.5 Statement of the measurement uncertainty 3.6 Equipments Used during the Test  4 TEST CONDITIONS AND RESULTS  4.1 AC Power Conducted Emission 4.2 Radiated Emission 4.3 The 20dB bandwidth 4.4 Antenna Requirement  5 TEST SETUP PHOTOS OF THE EUT	_			(C)
3.1 Address of the test laboratory 3.2 Test Facility 3.3 Environmental conditions 3.4 Summary of measurement results 3.5 Statement of the measurement uncertainty 3.6 Equipments Used during the Test  4 TEST CONDITIONS AND RESULTS  4.1 AC Power Conducted Emission 4.2 Radiated Emission 4.3 The 20dB bandwidth 4.4 Antenna Requirement  5 TEST SETUP PHOTOS OF THE EUT				5
3.1 Address of the test laboratory 3.2 Test Facility 3.3 Environmental conditions 3.4 Summary of measurement results 3.5 Statement of the measurement uncertainty 3.6 Equipments Used during the Test  4 TEST CONDITIONS AND RESULTS	E3.0			v
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3.5 Statement of the measurement uncertainty 3.6 Equipments Used during the Test  4 TEST CONDITIONS AND RESULTS	3	TEST ENVIRONMENT	••••••	6
3.5 Statement of the measurement uncertainty 3.6 Equipments Used during the Test  4 TEST CONDITIONS AND RESULTS		CTAIL		
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3.5 Statement of the measurement uncertainty 3.6 Equipments Used during the Test  4 TEST CONDITIONS AND RESULTS		Test Facility	TES	_
3.5 Statement of the measurement uncertainty 3.6 Equipments Used during the Test  4 TEST CONDITIONS AND RESULTS	-	Environmental conditions		6
3.5 Statement of the measurement uncertainty 3.6 Equipments Used during the Test  4 TEST CONDITIONS AND RESULTS		Summary of measurement results		TES 7
4 TEST CONDITIONS AND RESULTS 9 4.1 AC Power Conducted Emission 9 4.2 Radiated Emission 12 4.3 The 20dB bandwidth 16 4.4 Antenna Requirement 17 5 TEST SETUP PHOTOS OF THE EUT 18		Statement of the measurement uncertainty	CTP	7
4 TEST CONDITIONS AND RESULTS 9 4.1 AC Power Conducted Emission 9 4.2 Radiated Emission 12 4.3 The 20dB bandwidth 16 4.4 Antenna Requirement 17 5 TEST SETUP PHOTOS OF THE EUT 18				8
4.1 AC Power Conducted Emission 9 4.2 Radiated Emission 12 4.3 The 20dB bandwidth 16 4.4 Antenna Requirement 17 5 TEST SETUP PHOTOS OF THE EUT		4.1.		
4.1 AC Power Conducted Emission 9 4.2 Radiated Emission 12 4.3 The 20dB bandwidth 16 4.4 Antenna Requirement 17 5 TEST SETUP PHOTOS OF THE EUT	4	TEST CONDITIONS AND RESULTS		9
5 TEST SETUP PHOTOS OF THE EUT18	•	TEGT GONDITIONG AND REGGETG	••••••	
5 TEST SETUP PHOTOS OF THE EUT18		ESI		
5 TEST SETUP PHOTOS OF THE EUT18		AC Power Conducted Emission		•
5 TEST SETUP PHOTOS OF THE EUT18		Radiated Emission		
5 TEST SETUP PHOTOS OF THE EUT18		The 20dB bandwidth		
5 TEST SETUP PHOTOS OF THE EUT18	4.4	Antenna Requirement		17
6 PHOTOS OF THE FUT				
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	ь	PHOTOS OF THE EUT	••••••	19

Report No.: CTA22030900201 Page 4 of 24

# TEST STANDARDS

The tests were performed according to following standards:

FCC Rules and Regulations Part 15 Subpart C (Section 15.207): Conducted limits.

FCC Rules and Regulations Part 15 Subpart C (Section 15.200): P. ... FCC Rules and Regulations Part 15 Subpart C (Section 15.209): Radiated emission limits; general requirements.

ANSI C63.10: 2013: American National Standard for Testing Unlicensed Wireless Devices

Page 5 of 24 Report No.: CTA22030900201

# SUMMARY

# **General Remarks**

2.1 General Remarks	TATESTING
Date of receipt of test sample	: Mar. 03, 2022
Testing commenced on	: Mar. 03, 2022
Testing concluded on	: Mar. 15, 2022

# 2.2 Product Description

Mar. 03, 2022
Mar. 15, 2022
Portable wireless charging desk lamp
DJ06
V1.0
V1.0 CTA
CTA22030900201-1# (Engineer sample), CTA22030900201-2# (Normal sample)
Input: DC 5V From External circuit or 3.7V from battery Output: Wireless Charging: 10W(Max) USB output port: 5V2A, 10W
110KHz - 205KHz
ASKSTING
Loop coil antenna

# 2.3 Description of the test mode

Equipment under test was operated during the measurement under the following conditions:

Charging and communication mode

Test Mod	des:				
Mode 1 Wireless Charging Recorded					
Mode 2	Standby	Pre-tested			
Note: All test modes were pre-tested, but we only recorded the worst case in this report.					

# **Special Accessories**

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

Description	Manufacturer	Model	Technical Parameters	Certificate	Provided by
Adapter	, NG	GS-551	Input: 100-240V~, 50/60Hz, 0.6A Output:DC 5V 2A/5V 1.67A/12V 1.67A	CE/FCC	laboratory
Wireless charging	YBZ	TX-test	5A, 30W	/	1

## 2.5 Modifications

No modifications were implemented to meet testing criteria.

Page 6 of 24 Report No.: CTA22030900201

# TEST ENVIRONMENT

# Address of the test laboratory

Shenzhen CTA Testing Technology Co., Ltd. Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

# 3.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 517856 Designation Number: CN1318

Shenzhen CTA Testing Technology Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA-Lab Cert. No.: 6534.01

Shenzhen CTA Testing Technology Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010.

## **Environmental conditions**

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

Radiated Emission:

Temperature:	24 ° C
The state of the s	-TA
Humidity:	45 %
Atmospheric pressure:	950-1050mbar

#### AC Power Conducted Emission:

_	C i ower conducted Emission.	
	Temperature:	25 ° C
	ING	
	Humidity:	46 %
	TIN	3
	Atmospheric pressure:	950-1050mbar

# Conducted testing:

Atmospheric pressure:	950-1050mbar
Conducted testing:	ESTING
Temperature:	25 ° C
	C
Humidity:	44 %
	2000
Atmospheric pressure:	950-1050mbar

Report No.: CTA22030900201 Page 7 of 24

# Summary of measurement results

Description of test	Result
Conducted emissions test	Compliant
Radiated emission test	Compliant
The 20dB bandwidth measurement	Compliant
Antenna requirement	Compliant
	C
3.5 Statement of the measurement uncertainty	

# 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 CTA Testing Technology Co., Ltd. quality system 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 CTA laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.06 dB	(1)
Radiated Emission	1~18GHz	5.14 dB	(1)
Radiated Emission	18-40GHz	5.38 dB	(1)
Conducted Disturbance	0.15~30MHz	2.14 dB	(1)

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

Report No.: CTA22030900201 Page 8 of 24

#### **Equipments Used during the Test** 3.6

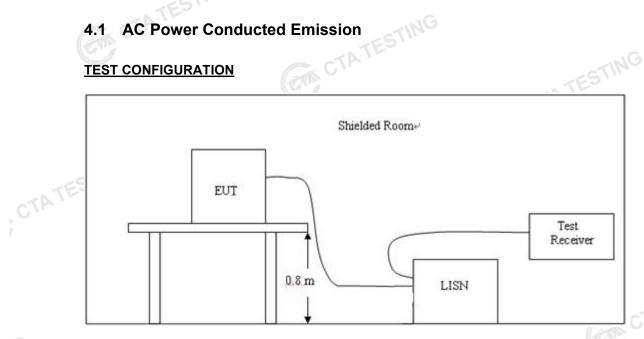
	Test Equipment	Manufacturer	Model No.	Equipment No.	Calibration Date	Calibration Due Date
	LISN	R&S	ENV216	CTA-308	2021/08/06	2022/08/05
	LISN	R&S	ENV216	CTA-314	2021/08/06	2022/08/05
	EMI Test Receiver	R&S	ESPI	CTA-307	2021/08/06	2022/08/05
	EMI Test Receiver	R&S	ESCI	CTA-306	2021/08/06	2022/08/05
TATE	Spectrum Analyzer	Agilent	N9020A	CTA-301	2021/08/06	2022/08/05
CALL	Spectrum Analyzer	R&S	FSP	CTA-337	2021/08/06	2022/08/05
1	Vector Signal generator	Agilent	N5182A	CTA-305	2021/08/06	2022/08/05
	Analog Signal Generator	R&S	SML03	CTA-304	2021/08/06	2022/08/05
	Universal Radio Communication	CMW500	R&S	CTA-302	2021/08/06	2022/08/05
<sub>l</sub> G	Temperature and humidity meter	Chigo	ZG-7020	CTA-326	2021/08/06	2022/08/05
	Ultra-Broadband Antenna	Schwarzbeck	VULB9163	CTA-310	2021/08/07	2022/08/06
	Horn Antenna	Schwarzbeck	BBHA 9120D	CTA-309	2021/08/07	2022/08/06
	Loop Antenna	Zhinan	ZN30900C	CTA-311	2021/08/07	2022/08/06
	Horn Antenna	Beijing Hangwei Dayang	OBH100400	CTA-336	2021/08/06	2022/08/05
	Amplifier	Schwarzbeck	BBV 9745	CTA-312	2021/08/06	2022/08/05
	Amplifier	Taiwan chengyi	EMC051845B	CTA-313	2021/08/06	2022/08/05
	Directional coupler	NARDA	4226-10	CTA-303	2021/08/06	2022/08/05
	High-Pass Filter	XingBo	XBLBQ-GTA18	CTA-402	2021/08/06	2022/08/05
-5	High-Pass Filter	XingBo	XBLBQ-GTA27	CTA-403	2021/08/06	2022/08/05
CTATL	Automated filter bank	Tonscend	JS0806-F	CTA-404	2021/08/06	2022/08/05
1	Power Sensor	Agilent	U2021XA	CTA-405	2021/08/06	2022/08/05
	Amplifier	Schwarzbeck	BBV9719	CTA-406	2021/08/06	2022/08/05
	Note: The Cal.Interva	I was one year.	CTA CTA		GVA CT	ATESTING

Report No.: CTA22030900201 Page 9 of 24

# TEST CONDITIONS AND RESULTS

# 4.1 AC Power Conducted Emission

### **TEST CONFIGURATION**



#### **TEST PROCEDURE**

- 1, The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10.
- 2, Support equipment, if needed, was placed as per ANSI C63.10.
- 3, All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4, If a EUT received DC power from the USB Port of Notebook PC, the PC's adapter received power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5, All support equipments received AC power from a second LISN, if any.
- 6, The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7, Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.

#### **AC Power Conducted Emission Limit**

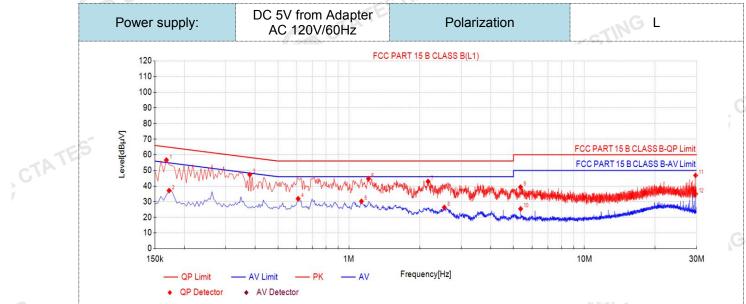
For intentional device, according to § 15.207(a) AC Power Conducted Emission Limits is as following:

Frequency range (MHz)	Limit	Limit (dBuV)		
Frequency range (Wiriz)	Quasi-peak	Average		
0.15-0.5	66 to 56*	56 to 46*		
0.5-5	56	46		
5-30	60	50		
* Decreases with the logarithm of the frequency	uency.			
CTA TESTING	TATESTING	.NG		

Page 10 of 24 Report No.: CTA22030900201

#### **TEST RESULTS**

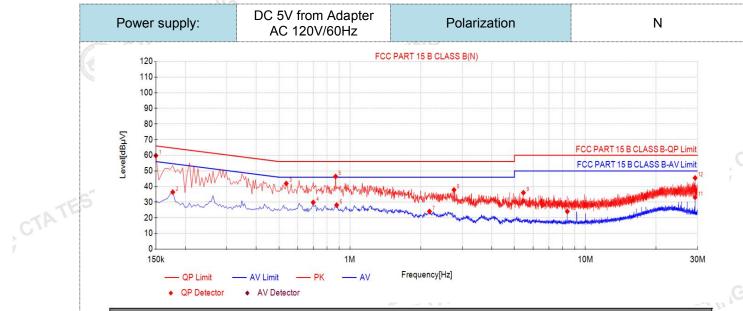
1. Both 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz power supply have been tested, only the worst result of 120 VAC, 60 Hz was reported as below:



	Suspected List										42	
		NO.	Freq. [MHz]	Reading [dBµV]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Detector	Туре	Verdict	
	69 to 118	1	0.168	46.13	56.63	10.50	65.06	8.43	PK	L1	PASS	
	10000	2	0.1725	26.61	37.11	10.50	54.84	17.73	AV	L1	PASS	
		3	0.3795	36.82	47.32	10.50	58.29	10.97	PK	L1	PASS	
		4	0.609	21.40	31.90	10.50	46.00	14.10	AV	L1	PASS	
		5	1.131	19.74	30.24	10.50	46.00	15.76	AV	L1	PASS	
		6	1.212	34.22	44.72	10.50	56.00	11.28	PK	L1	PASS	K CAP
	-11	7	2.1705	32.44	42.94	10.50	56.00	13.06	PK	L1	PASS	
CTATE	2//	8	2.544	15.85	26.35	10.50	46.00	19.65	AV	L1	PASS	
CTA		9	5.361	28.82	39.32	10.50	60.00	20.68	PK	L1	PASS	
		10	5.3655	14.95	25.45	10.50	50.00	24.55	AV	L1	PASS	
		11	29.7105	36.35	46.85	10.50	60.00	13.15	PK	L1	PASS	
		12	29.7105	24.56	35.06	10.50	50.00	14.94	AV	L1	PASS	NG
	Note	e: Note:	1).QP Valu	ie (dBµV):	= QP Re	ading (dl	BμV)+ Fa	ctor (dB)	- X-		TEST	1114
	1 1	•	dB)=inserti gin(dB) = Q		•	•	•	В)			TATES	
	4). A	4VMarg	$\sin(dB) = A^{t}$	√ Limit (dE	3μV) - Α\	√ Value (	dBµV)					

- 2). Factor (dB)=insertion loss of LISN (dB) + Cable loss (dB)
- 3). QPMargin(dB) = QP Limit (dB $\mu$ V) QP Value (dB $\mu$ V)
- 4).  $AVMargin(dB) = AV Limit (dB\mu V) AV Value (dB\mu V)$ CTATESTING

Page 11 of 24 Report No.: CTA22030900201



	NO.	Freq. [MHz]	Reading [dBµV]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Detector	Туре	Verdict
	1	0.15	49.28	59.78	10.50	66.00	6.22	PK	N	PASS
	2	0.177	25.96	36.46	10.50	54.63	18.17	AV	N	PASS
13.00	3	0.537	31.45	41.95	10.50	56.00	14.05	PK	N	PASS
(3)	4	0.699	19.37	29.87	10.50	46.00	16.13	AV	N	PASS
100 asu 25	5	0.87	35.95	46.45	10.50	56.00	9.55	PK	N	PASS
	6	0.879	17.67	28.17	10.50	46.00	17.83	AV	N	PASS
	7	2.1795	13.64	24.14	10.50	46.00	21.86	AV	N	PASS
	8	2.769	27.38	37.88	10.50	56.00	18.12	PK	N	PASS
	9	5.46	25.59	36.09	10.50	60.00	23.91	PK	N	PASS
- STI	10	8.3895	13.59	24.09	10.50	50.00	25.91	AV	N	PASS
(EST)	11	29.2785	22.61	33.11	10.50	50.00	16.89	AV	N	PASS
	12	29.2785	35.00	45.50	10.50	60.00	14.50	PK	N	PASS

Note: Note:1).QP Value (dBμV)= QP Reading (dBμV)+ Factor (dB)

- 2). Factor (dB)=insertion loss of LISN (dB) + Cable loss (dB)
- 3). QPMargin(dB) = QP Limit (dB $\mu$ V) QP Value (dB $\mu$ V)
- 4). AVMargin(dB) = AV Limit (dB $\mu$ V) AV Value (dB $\mu$ V)

Page 12 of 24 Report No.: CTA22030900201

#### **Radiated Emission** 4.2

### Limit

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emission out of authorized band shall not exceed the following table at a 3 meters measurement distance.

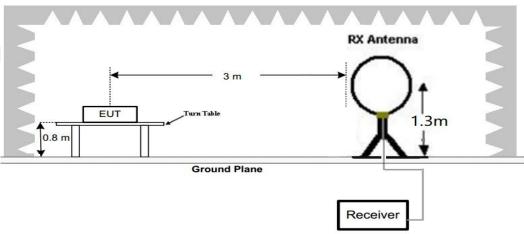
In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a)

Radiated	

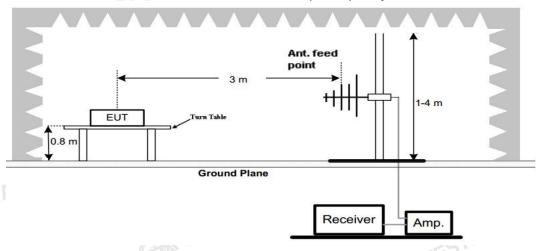
	Frequency (MHz)	Distance (Meters)	Radiated (dBµV/m)	Radiated (µV/m)
	0.009-0.49	3	20log(2400/F(KHz))+40log(300/3)	2400/F(KHz)
CTATE	0.49-1.705	3	20log(24000/F(KHz))+ 40log(30/3)	24000/F(KHz)
CALL	1.705-30	3	20log(30)+ 40log(30/3)	30
1	30-88	3	40.0	100
	88-216	3	43.5	150
	216-960	3	46.0	200
	Above 960	3	54.0	500

## **TEST CONFIGURATION**

Radiated Emission Test Set-Up, Frequency Below 30MHz



2. Radiated Emission Test Set-Up, Frequency below 1000MHz



Page 13 of 24 Report No.: CTA22030900201

#### **Test Procedure**

- Below 1GHz measurement the EUT is placed on a turntable which is 0.8m above ground plane.
- Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0°C to 360°C to acquire the highest emissions from EUT
- 3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- Repeat above procedures until all frequency measurements have been completed. 4.
- Radiated emission test frequency band from 9KHz to 1000MHz.
- The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
9KHz-30MHz	Active Loop Antenna	3
30MHz-1GHz	Bilog Antenna	3

Setting test receiver/spectrum as following table states:

	Test Frequency range	Test Receiver/Spectrum Setting	Detector	
	9KHz-150KHz	RBW=200Hz/VBW=3KHz,Sweep time=Auto	QP	
	150KHz-30MHz	RBW=9KHz/VBW=100KHz,Sweep time=Auto	QP	
	30MHz-1GHz	RBW=120KHz/VBW=1000KHz,Sweep time=Auto	QP	TING
?	<u>ESULTS</u>		CTATE	:51"
1	Hz_30MHz			

#### **TEST RESULTS**

#### For 9 KHz-30MHz

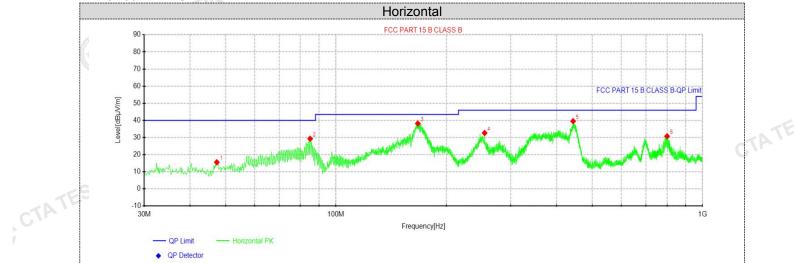
#### **WORST-CASE RADIATED EMISSION BELOW 30 MHz**

Frequency	Reading	Polar	Antenna Factor	Cable Loss	Emission Levels	Limits at 3m	Margin	Detector Mode
(MHz)	(dBµV/m)	Loop	(dB/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
0.1278(F)	64.61	Loop	23.63	0.02	88.26	105.47	17.21	PK
0.1278(F)	55.77	Loop	23.63	0.02	79.42	85.47	6.05	AV
0.110	47.70	Loop	23.51	0.02	71.23	106.78	35.55	PK
0.110	41.66	Loop	23.51	0.02	65.19	86.78	21.59	AV
0.288	29.22	Loop	23.82	-0.17	52.87	98.42	45.55	QP
0.471	26.72	Loop	24.21	-0.28	50.65	94.14	43.49	QP
0.549	25.72	Loop	24.32	-0.3	49.74	72.81	23.07	QP

- Data of measurement within this frequency range shown "-- in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits and not recorded.
- 2. The test limit distance is 3m limit.
- CTATESTING PK means Peak Value, QP means Quasi Peak Value, AV means Average Value.
- F means Fundamental Frequency. 4.
- Emission level (dBuV/m) = Reading + Antenna Factor + Cable Loss.
- Margin value = Limit value- Emission level.

Page 14 of 24 Report No.: CTA22030900201

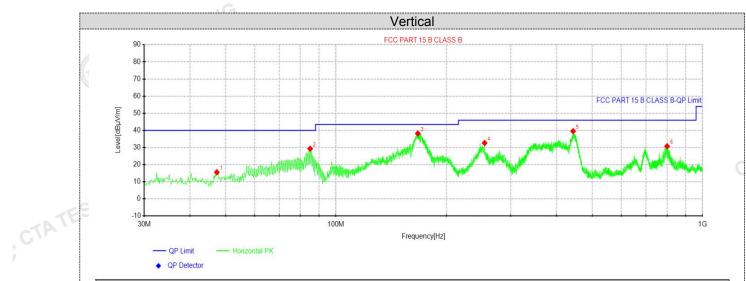
### For 30MHz-1GHz



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	
1	47.3388	31.85	15.58	-16.27	40.00	24.42	100	7	Horizontal	
2	85.0475	49.95	29.33	-20.62	40.00	10.67	100	7	Horizontal	
3	167.255	59.39	38.19	-21.20	43.50	5.31	100	131	Horizontal	
4	254.433	50.54	32.66	-17.88	46.00	13.34	100	285	Horizontal	
5	443.583	54.67	39.55	-15.12	46.00	6.45	100	285	Horizontal	
6	800.18	41.50	30.72	-10.78	46.00	15.28	100	269	Horizontal	

Note:1).Level ( $dB\mu V/m$ )= Reading ( $dB\mu V$ )+ Factor (dB/m)

- 2). Factor(dB/m)=Antenna Factor (dB/m) + Cable loss (dB) Pre Amplifier gain (dB)
- 3). Margin(dB) = Limit (dB $\mu$ V/m) Level (dB $\mu$ V/m)



Susp	Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity		
1	34.4862	46.03	28.09	-17.94	40.00	11.91	100	180	Vertical		
2	84.4412	56.67	35.96	-20.71	40.00	4.04	100	18	Vertical		
3	166.527	58.38	37.14	-21.24	43.50	6.36	100	51	Vertical		
4	251.402	41.24	23.29	-17.95	46.00	22.71	100	67	Vertical		
5	383.565	47.91	32.24	-15.67	46.00	13.76	100	319	Vertical		
6	702.816	33.20	21.42	-11.78	46.00	24.58	100	237	Vertical		

Note:1).Level ( $dB\mu V/m$ )= Reading ( $dB\mu V$ )+ Factor (dB/m)

- 2). Factor(dB/m)=Antenna Factor (dB/m) + Cable loss (dB) Pre Amplifier gain (dB)
- 3). Margin(dB) = Limit (dB $\mu$ V/m) Level (dB $\mu$ V/m)

Page 16 of 24 Report No.: CTA22030900201

#### The 20dB bandwidth 4.3

# **TEST CONFIGURATION**



#### **TEST PROCEDURE**

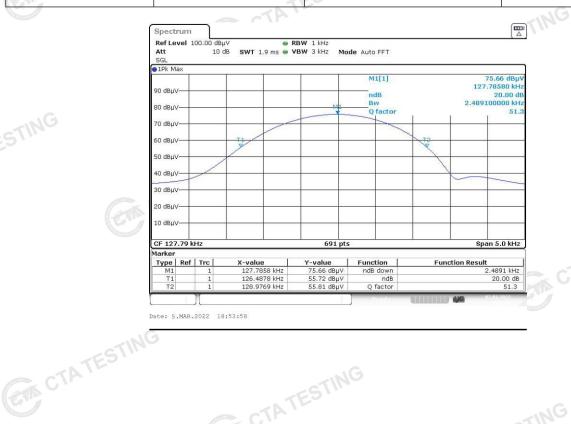
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in subpart E of this part, must be designed to ensure that 20dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equip compliance with the 20dB attenuation specification may base on measurement at the intentional radiator's antenna output terminal unless the intentional radiator uses a permanently attached antenna, in which case compliance shall be deomonstrated by measuring the radiated emissions.

#### LIMIT

The 20dB bandwidth shall be less than 80% of the permitted frequency band.

#### **TEST RESULTS**

Mode	Freq (KHz)	20dB Bandwidth (KHz)	Conclusion	
Tx Mode	127.7958	2.4891	PASS	



Page 17 of 24 Report No.: CTA22030900201

# **Antenna Requirement**

### Standard Applicable

## Standard Applicable

CTA TESTING For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to CTATE ensure that no antenna other than that furnished by the responsible party shall be used with the device.

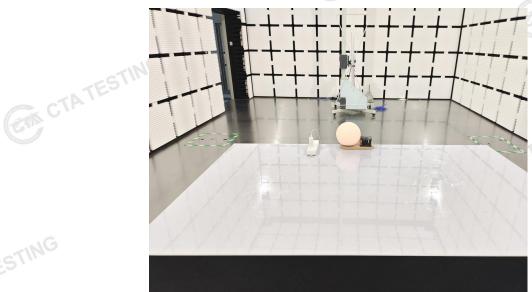
#### Antenna Information

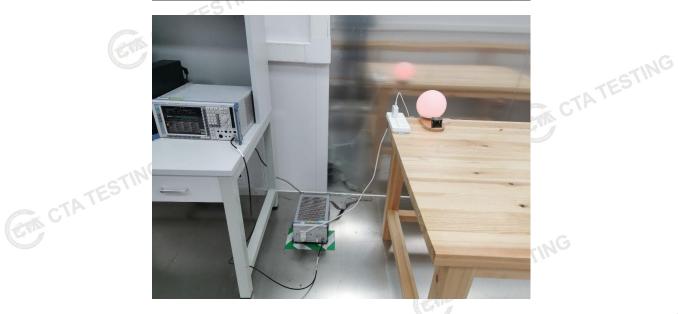
The antenna used in this product is a Coil Antenna, The directional gains of antenna used for transmitting is CTATE!

Report No.: CTA22030900201 Page 18 of 24

# Test Setup Photos of the EUT







Report No.: CTA22030900201 Page 19 of 24

# PHOTOS OF THE EUT





Report No.: CTA22030900201 Page 20 of 24





Report No.: CTA22030900201 Page 21 of 24

