

## FCC/IC - TEST REPORT

Report Number : **68.730.17.018.01** Date of Issue: **March 2, 2017**

Model : **SE-1515**

Product Type : **PC ECG**

Applicant : **EDAN INSTRUMENTS, INC.**

Address : **15# Jinhui Road, Jinsha Community, Kengzi Sub-District, Pingshan District, 518122 Shenzhen, P.R.China**

Manufacturer : **EDAN INSTRUMENTS, INC.**

Address : **15# Jinhui Road, Jinsha Community, Kengzi Sub-District, Pingshan District, 518122 Shenzhen, P.R.China**

Test Result :  **Positive**     **Negative**

Total pages including Appendices : **14**

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## 2 Details about the Test Laboratory

### Details about the Test Laboratory

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch  
Building 12&13, Zhiheng Wisdomland Business Park,  
Nantou Checkpoint Road 2, Nanshan District,  
Shenzhen City, 518052,  
P. R. China

FCC Registration Number: 502708

IC Registration No: 10320A-1

Telephone: 86 755 8828 6998  
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### 3 Description of the Equipment Under Test

Product:	PC ECG
Model no.:	SE-1515
Brand Name:	EDAN
FCC ID:	SMQDX12REEDAN
Options and accessories:	NIL
Rating:	5.0Vdc supplied by USB Port
RF Transmission Frequency:	2402-2480MHz
No. of Operated Channel:	79
Modulation:	GFSK, $\pi/4$ -DQPSK, 8DPSK
Antenna Type:	Integral Antenna
Antenna Gain:	2.0dBi

Remark 1: The above EUT's information is declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

## 4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart B 10-1-16 Edition	Unintentional Radiators
ICES-003 Issue 6 January, 2016	Information Technology Equipment (ITE) – Limits and methods of measurement

## 5 Summary of Test Results

Emission Tests				
FCC Part 15 Subpart B 10-1-16 Edition/ICES-003 Issue 6				
Test Condition	Pages	Test Result		
		Pass	Fail	N/A
Conducted Emission on AC 150kHz to 30MHz	8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radiated Emission 30MHz to 1000MHz	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radiated Emission 1000MHz to 6000MHz	--	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Remark: The highest frequency of the internal sources of the EUT is 48MHz less than 108 MHz, the measurement shall only be made up to 1 GHz.

## 6 General Remarks

### Remarks

Nil.

### SUMMARY:

All tests according to the regulations cited on page 5 were

■ - Performed

□ - **Not** Performed

The Equipment under Test

■ - **Fulfills** the general approval requirements.

□ - **Does not** fulfill the general approval requirements.

Sample Received Date: February 12, 2017

Testing Start Date: February 13, 2017

Testing End Date: February 17, 2017

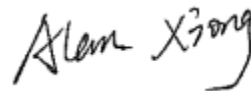
- TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch -

Reviewed by:

Prepared by:



John Zhi  
Section Manager



Alan Xiong  
Project Engineer

## 7 Technical Requirement

### 7.1 Conducted Emission Test

#### Test Method

1. The EUT was placed on a table, which is 0.8m above ground plane
2. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
3. Maximum procedure was performed to ensure EUT compliance
4. A EMI test receiver is used to test the emissions from both sides of AC line

#### Limit

According to §15.107, conducted emissions limit as below:

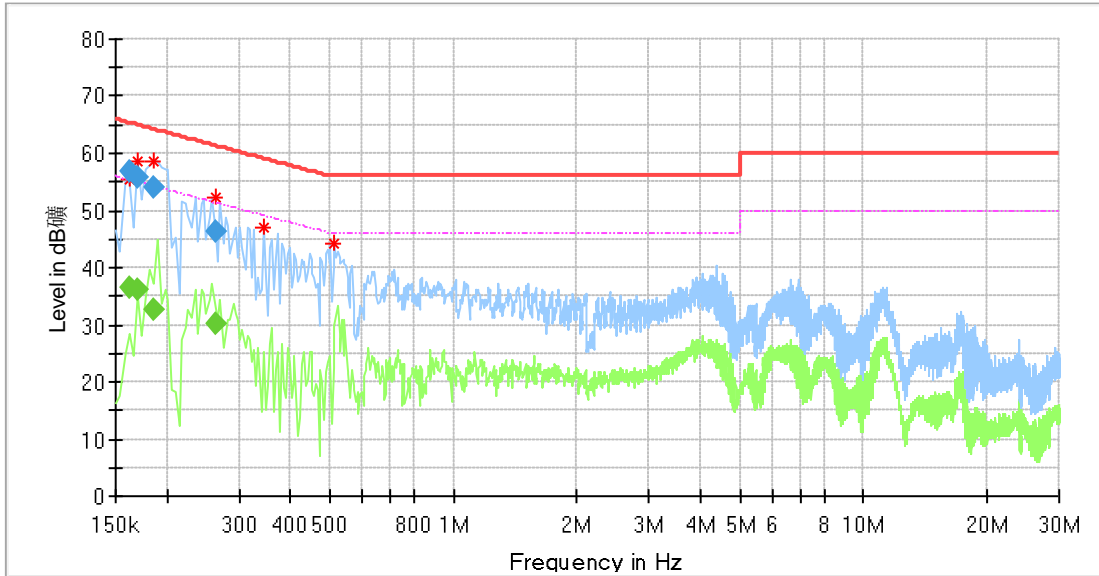
Frequency MHz	QP Limit dB $\mu$ V	AV Limit dB $\mu$ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

Decreasing linearly with logarithm of the frequency



## Conducted Emission

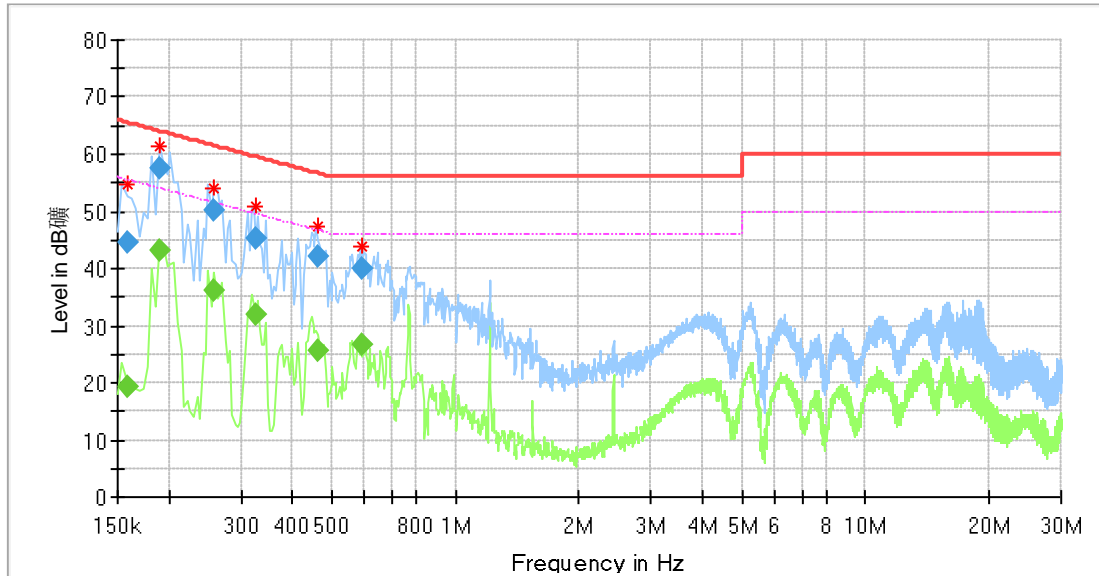
Product Type : PC ECG  
 M/N : SE-1515  
 Operating Condition : Data transmission via USB Port  
 Test Specification : Line  
 Comment : AC 120V/60Hz



Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.162500	---	36.62	55.34	18.72	L1	9.7
0.162500	56.98	---	65.34	8.36	L1	9.7
0.169500	---	36.10	54.98	18.88	L1	9.7
0.169500	55.88	---	64.98	9.10	L1	9.7
0.185500	---	32.71	54.24	21.53	L1	9.7
0.185500	54.15	---	64.24	10.09	L1	9.7
0.262500	---	30.20	51.35	21.15	L1	9.7
0.262500	46.15	---	61.35	15.20	L1	9.7
0.346000	47.16	---	59.06	11.90	L1	9.7
0.514000	44.14	---	56.00	11.86	L1	9.7

## Conducted Emission

Product Type : PC ECG  
 M/N : SE-1515  
 Operating Condition : Data transmission via USB Port  
 Test Specification : Neutral  
 Comment : AC 120V/60Hz



Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.158000	---	19.44	55.57	36.13	N	9.6
0.158000	44.49	---	65.57	21.08	N	9.6
0.189500	---	43.18	54.06	10.88	N	9.6
0.189500	57.71	---	64.06	6.35	N	9.6
0.257500	---	36.15	51.51	15.36	N	9.7
0.257500	50.27	---	61.51	11.24	N	9.7
0.325500	---	31.97	49.57	17.60	N	9.7
0.325500	45.16	---	59.57	14.41	N	9.7
0.461500	---	25.61	46.67	21.06	N	9.7
0.461500	42.18	---	56.67	14.49	N	9.7
0.590500	---	26.77	46.00	19.23	N	9.7
0.590500	40.14	---	56.00	15.86	N	9.7

Remark: The estimated measurement uncertainty of the result measurement is  $\pm 3.46$ dB.

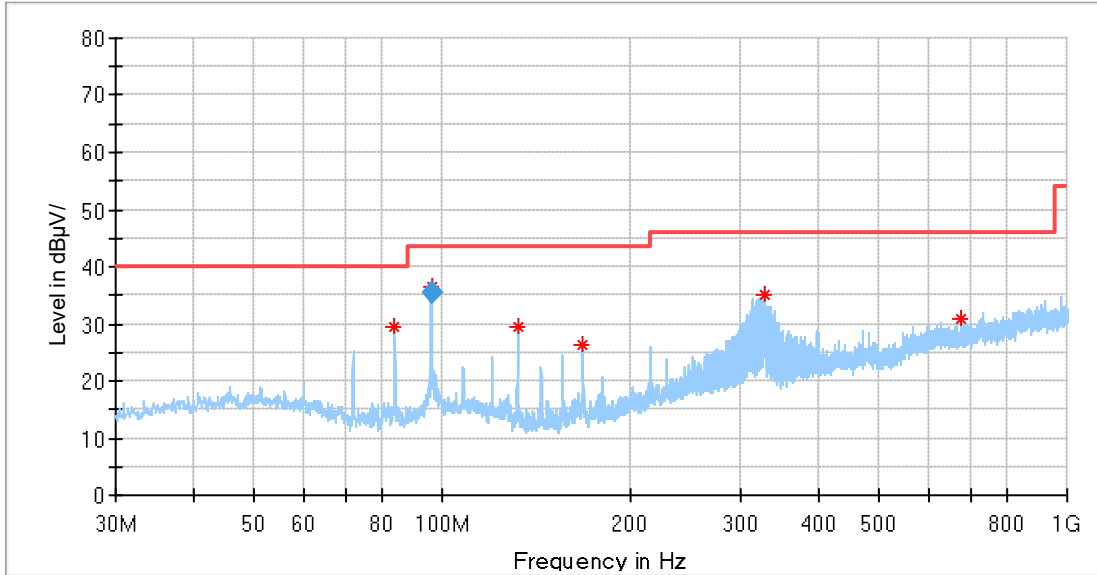
## Test Equipment List

### Conducted emission test

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 3	101782	2017-7-15
LISN	Rohde & Schwarz	ENV4200	100249	2017-7-15
LISN	Rohde & Schwarz	ENV216	100326	2017-7-15
ISN	Rohde & Schwarz	ENY81	100177	2017-7-15
ISN	Rohde & Schwarz	ENY81-CA6	101664	2017-7-15
High Voltage Probe	Rohde & Schwarz	TK9420(VT94 20)	9420-58	2017-7-15
RF Current Probe	Rohde & Schwarz	EZ-17	100816	2017-7-15
Test software	Rohde & Schwarz	EMC32	Version9.15.0 0	N/A

## 7.2 Radiated Emission Test 30MHz – 1000MHz

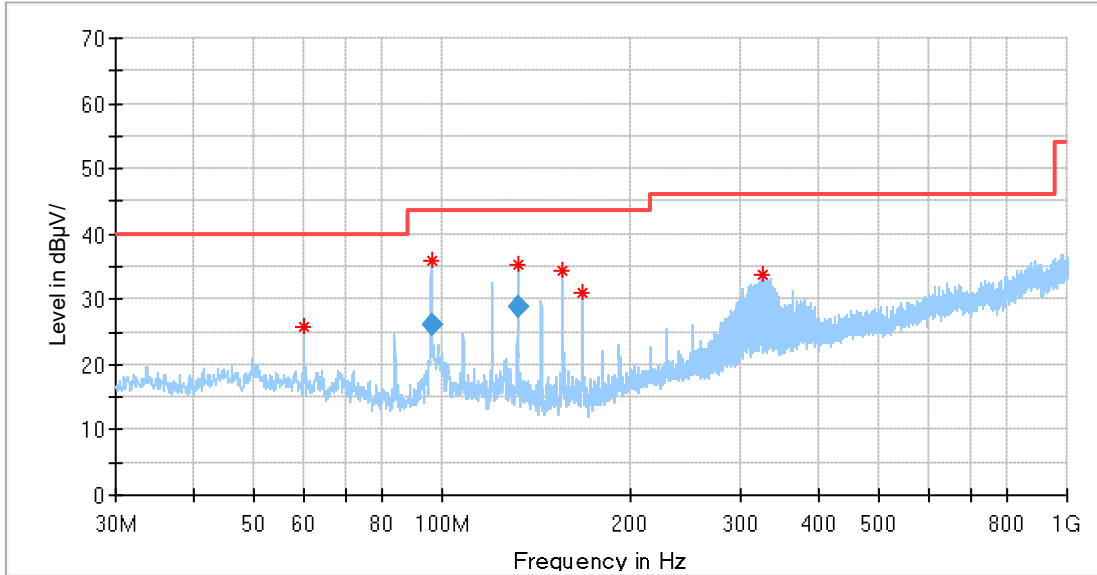
Product Type : PC ECG  
 M/N : SE-1515  
 Operating Condition : Data transmission via USB Port  
 Ant. Polarity : Horizontal  
 Comment : 30-1000MHz



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
83.956250	29.40	40.00	10.60	200.0	H	0.0	12.8
95.960000	35.36	43.50	8.14	200.0	H	0.0	15.6
131.971250	29.52	43.50	13.98	200.0	H	115.0	12.7
167.982500	26.38	43.50	17.12	200.0	H	0.0	13.5
329.063125	34.96	46.00	11.04	100.0	H	300.0	19.1
675.231875	30.93	46.00	15.07	200.0	H	198.0	26.0

## Radiated Emission Test 30MHz – 1000MHz

Product Type : PC ECG  
 M/N : SE-1515  
 Operating Condition : Data transmission via USB Port  
 Ant. Polarity : Vertical  
 Comment : 30-1000MHz



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
59.948750	25.69	40.00	14.31	100.0	V	135.0	17.0
96.036875	26.12	43.50	17.38	315.0	V	119.0	15.6
132.045000	28.97	43.50	14.53	100.0	V	350.0	14.2
155.918125	34.25	43.50	9.25	100.0	V	0.0	13.3
167.982500	31.09	43.50	12.41	100.0	V	299.0	14.3
325.243750	33.66	46.00	12.34	200.0	V	256.0	20.8

Remark: The estimated measurement uncertainty of the result measurement is  $\pm 4.99$ dB (Horizontal)  
 $\pm 4.97$ dB (Vertical)

**Test Equipment List****Radiated Emission Test**

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 26	101269	2017-7-15
Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9163	707	2017-8-3
Horn Antenna	Rohde & Schwarz	HF907	102294	2017-7-15
Pre-amplifier	Rohde & Schwarz	SCU 18	102230	2017-7-15
3m Semi-anechoic chamber	TDK	9X6X6	----	2019-5-29
Test software	Rohde & Schwarz	EMC32	Version 9.15.00	N/A

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THE END