

# TEST REPORT

**REPORT NUMBER: I21W00017-EMC\_Rev1**

**ON**

**Type of Equipment:** Tracker  
**Type of Designation:** PA32  
**Manufacturer:** Micron Electronics LLC.

**ACCORDING TO**  
**Subpart B, PART 15, RADIO FREQUENCY DEVICES**

**Chongqing Academy of Information and Communication Technology**

*Month date, year*  
*Aug 13, 2021*

*Signature*



***Xiang Luoyong***  
Director

**Note:**

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of Chongqing Academy of Information and Communication Technology.



**Report No.: I21W00017-EMC\_Rev1**

**Revision Version**

<b>Report Number</b>	<b>Revision</b>	<b>Date</b>	<b>Memo</b>
I21W00017-EMC	00	2021-07-30	Initial creation of test report
I21W00017-EMC_Rev1	01	2021-08-13	--

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**Report No.: I21W00017-EMC\_Rev1**

**FCC ID:** ZKQ-CM911B

**Report Date:** 2021-08-13

**Test Firm Name:** Chongqing Academy of Information and Communication  
Technology

**FCC Registration Number:** CN1239

#### Statement

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported tests were carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47 Part 15B. The sample tested was found to comply with the requirements defined in the applied rules.

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## **1 General Information**

### **1.1 Notes**

All reported tests were carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47 Part15B.

The test results of this test report relate exclusively to the item(s) tested as specified in section 2.

The following deviation from, additions to, or exclusions from the test specifications have been made. See Annex C.

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## 1.2 Testers

Name: Chen Xin  
Position: Engineer  
Department: Department of EMC test  
Date: 2021-08-13  
Signature:



Editor of this test report:

Name: Xiao Yu  
Position: Engineer  
Department: Department of EMC test  
Date: 2021-08-13  
Signature:



Technical responsibility for area of testing:

Name: Xiang Luoyong  
Position: Manager  
Department: Department of EMC test  
Date: 2021-08-13  
Signature:



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**1.3 Testing Laboratory information****1.3.1 Location**

Name: Chongqing Academy of Information and Communications

Address: Building B, Technology Innovation Center, No.8, Yuma  
Road, Chayuan New Area, Nan'an District, Chongqing,  
People's Republic of China, 401336

Tel: +86 23 88069965

Fax: +86 23 88608777

Email: liqiao@caict.ac.cn

**1.3.2 Details of accreditation status**

Accredited by: --

Registration number: --

Standard: --

**1.3.3 Test location, where different from section 1.3.1**

Name: --

Address: --

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**1.4 Details of applicant or manufacturer****1.4.1 Applicant**

Name: Micron Electronics LLC.  
Address: 1001 Yamato Road, Suite 400, Boca Raton, FL 33431, USA  
Country: USA  
Telephone: 1 888 538 3489  
Fax: --  
Contact: Ping Cheng  
Email: pcheng@micron-electronics.com

**1.4.2 Manufacturer (if different from applicant in section 1.4.1)**

Name: Micron Electronics LLC.  
Address: 1001 Yamato Road, Suite 400, Boca Raton, FL 33431, USA  
Country: USA



## 2 Test Item

### 2.1 General Information

Manufacturer: Micron Electronics LLC.  
Name: Tracker  
Model Number: PA32  
Serial Number: P4L60304010018  
IMEI: 866884045658127  
Production Status: Product  
Receipt date of test item: 2021-06-18

### 2.2 Outline of EUT

The EUT Porta is a Product supporting, BLE,WLAN,PCS 1900 and CAT-M BAND 2/4/5/12/13.

### 2.3 Modifications Incorporated in EUT

The EUT has not been modified from what is described by the brand name and unique type identification stated above.

### 2.4 Equipment Configuration

Equipment configuration list:

Item	Generic Description	Manufacturer	Type	Serial No.	Remarks
A	Product	Micron Electronics LLC.	PA32	P4L60304010 018	None

### 2.5 Other Information

AE ID*	Description	Model	SN
A1	Adapter	CD112	50714

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### 3 Summary of Test Results

A brief summary of the tests carried out is shown as following.

Configuration1		
Specification Clause	Name of Test	Result
15.107	Conducted limits	P
15.109	Radiated Emission limits	P

### 4. Test equipment and Test software

Test equipment Used:							
Number	Description	Manufacturer	Model Number	Serial Number	Cal. Date	Cal Due	State
1	Test Receiver	R&S	ESU 26 20Hz-26.5GHz	100350	2021-05-12	2022-06-11	Normal
2	Trilog Antenna	Schwarzbeck	VULB9163	00995	2021-03-04	2023-04-03	Normal
3	Double Ridged Guide Antenna	Schwarzbeck	HF907	100357	2019-07-21	2021-08-20	Normal
4	Fully-Anechoic Chamber	TDK	FAC	--	2020-12-23	2024-01-22	Normal
5	AMN	R/S	ENV216	101128	2021-05-12	2022-06-11	Normal
6	EMI Test Receiver	R/S	ESCI 9KHz-3GHZ	101214	2021-05-12	2022-06-11	Normal

Test software Used:				
Number	Test item	Test software name	Manufacturer	Version:
1	Radiated Emission	EMC32	R/S	V8.51.0
2	Conducted Emission	EMC32	R/S	V8.51.0

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## 5 Test Results

### 5.1 Radiated Emission

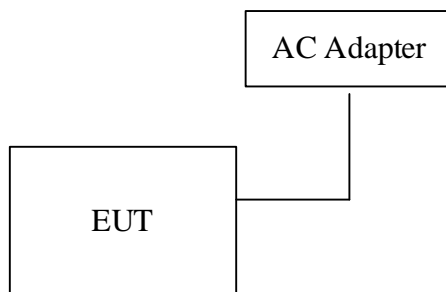
Specifications:	15.109
Date of Tests	2021-07-19
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa
Operation Mode	Normal
Test Results:	Pass

#### Limit Level Construction(Except for Class A digital devices):

Frequency Range (MHz)	Quasi-Peak (dBuV/m)
30-88	40
88-216	43.5
216-960	46
Above 960	54

Frequency Range (MHz)	Peak (dBuV/m)	Average (dBuV/m)
Above 1000	74	54

#### EUT Setup:



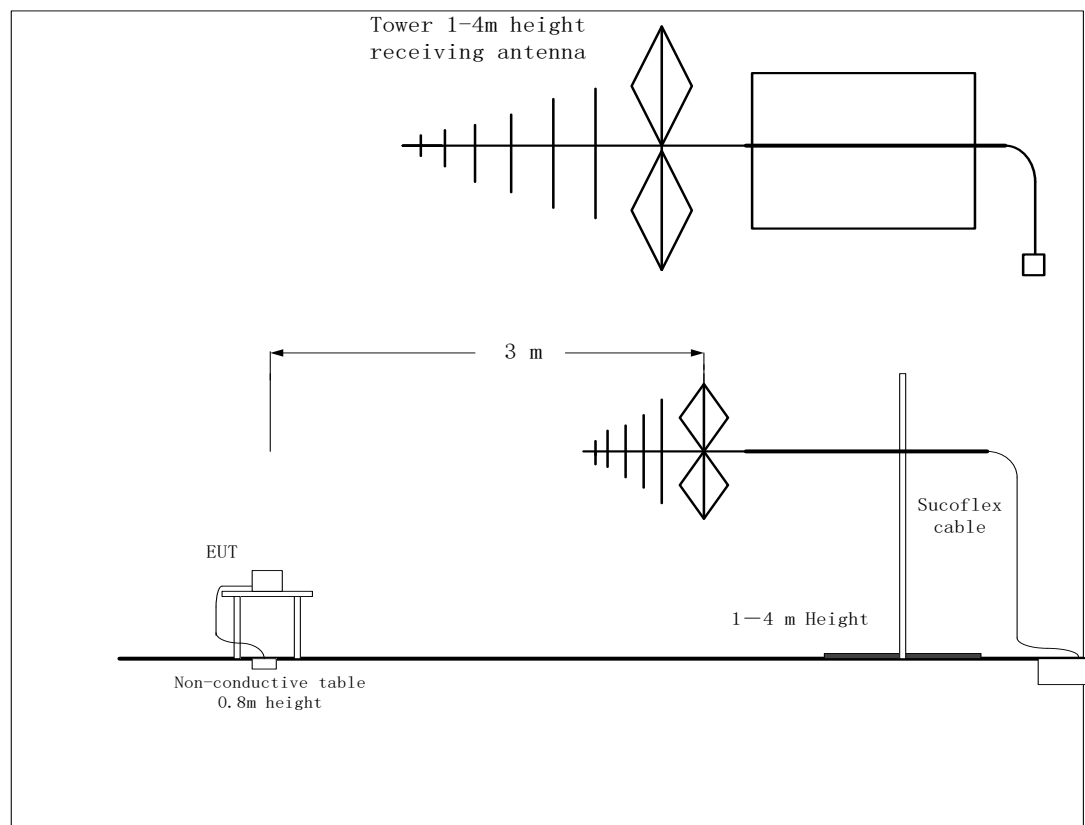
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### Test Setup:



### Test Method:

For 30-1000MHz, the EUT was placed on the top of a rotating 0.8m table above the ground at a semi-anechoic chamber. The distance between the EUT and the received antenna was 3 meters. The table was rotated 360 degree and the received antenna mounted on a variable-height antenna tower was varied from 1m to 4m to find the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were set during the measurement. Tested in accordance with the procedures of ANSI C63.4-2014, section 8.3.

For 1000-18000MHz, the maximal emission value was acquired by adjusting the antenna height, and the table was rotated 360 degree to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were set during the measurement.

### Uncertainty Measurement:

The measurement uncertainty (30MHz-1000MHz) is 3.97 dB ( $k=2$ ).

The measurement uncertainty (1000MHz-6000MHz) is 3.29 dB ( $k=2$ ).

The measurement uncertainty (6000MHz-18000MHz) is 3.91 dB ( $k=2$ ).

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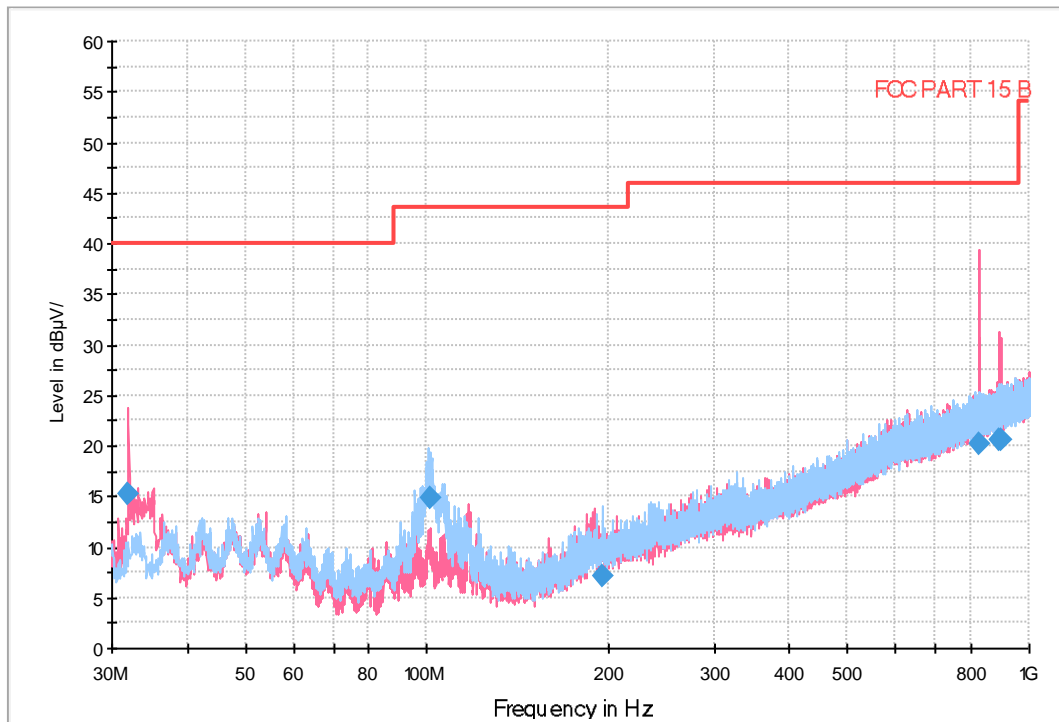
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## Test Data

RE 30MHz-1GHz



RE 30M-1G

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
31.940000	15.2	40.0	24.8	5000.0	120.000	103.0	V	80.0	-20.2
101.019000	14.9	43.5	28.6	5000.0	120.000	285.0	H	-1.0	-18.5
196.061000	7.1	43.5	36.4	5000.0	120.000	103.0	H	-1.0	-18.2
828.107000	20.1	46.0	25.9	5000.0	120.000	185.0	V	269.0	-5.1
889.562500	20.5	46.0	25.5	5000.0	120.000	103.0	V	280.0	-4.4
898.895500	20.6	46.0	25.4	5000.0	120.000	200.0	V	179.0	-4.2

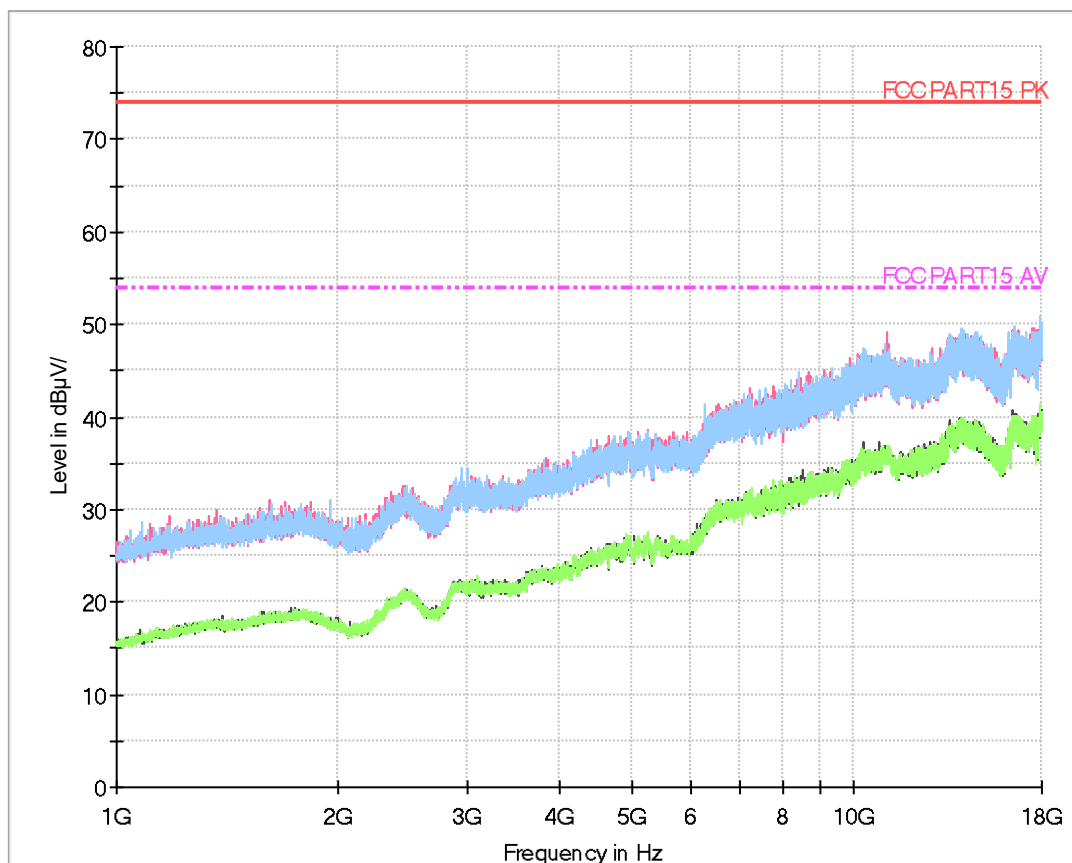
Note: The red curve represents V polarization, the blue curve represents V polarization.

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RE 1-18G

## 5.2 Conducted Emission

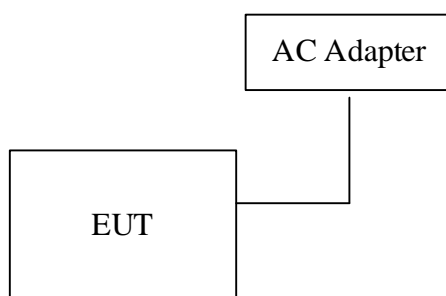
<b>Specifications:</b>	15.107
<b>Date of Tests</b>	2021-07-02
<b>Test conditions:</b>	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa
<b>Operation Mode</b>	Normal
<b>Test Results:</b>	Pass

### Limit Level Construction:

Frequency Range (MHz)	Conducted Limit (dBuV)	
	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

### EUT Setup:



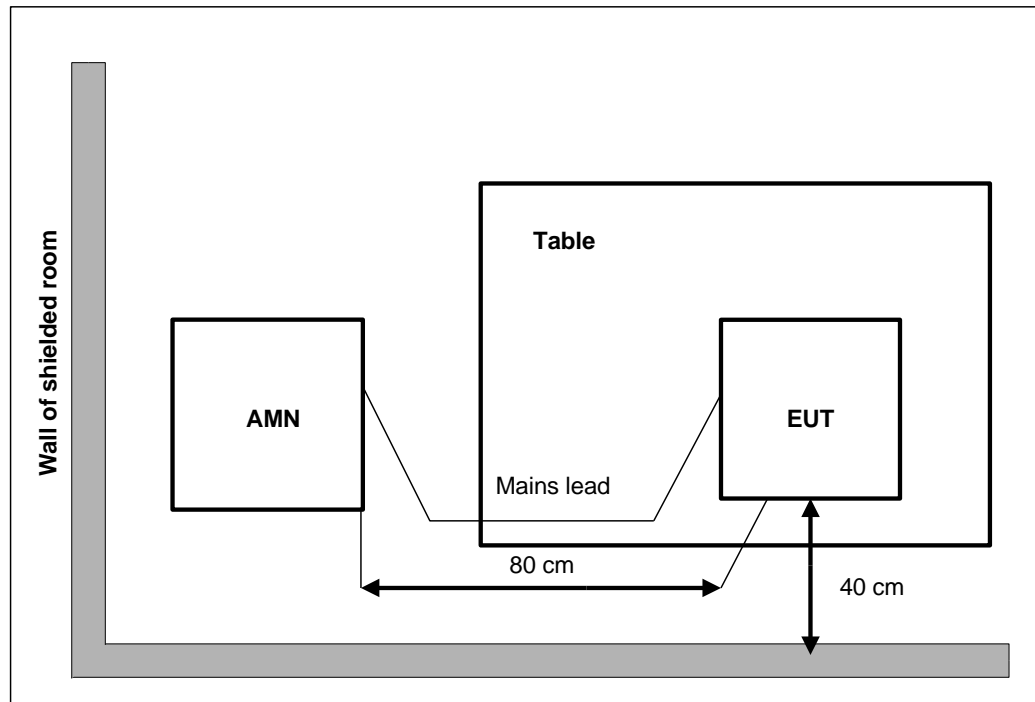
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### Test Setup:



### Test Method:

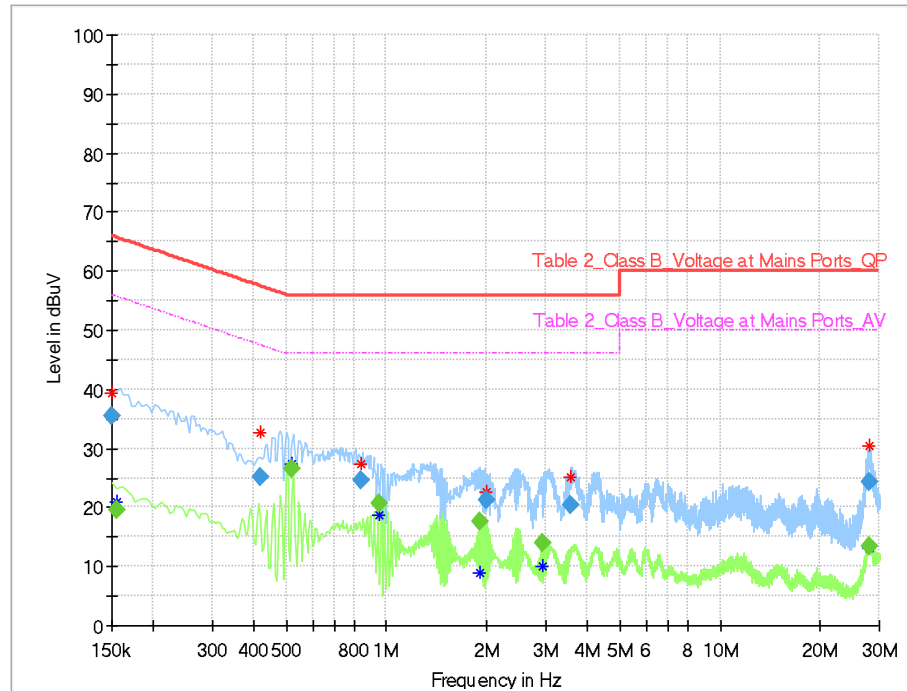
For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies with the band 150 kHz to 30MHz shall not exceed the limits. Both lines of the power mains connected to the EUT were checked for maximum conducted interference. Tested in accordance with the procedures of ANSI C63.4-2014, section 7.3

### Uncertainty Measurement:

The measurement uncertainty is 1.83 dB (k=2).



## Test Data



L&N 150KHz-30MHz

## Final\_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Line	Filter	Corr. (dB)
0.150000	35.41	---	66.00	30.59	1000.0	N	ON	10.9
0.154500	---	19.67	55.75	36.08	1000.0	N	ON	10.6
0.416228	25.18	---	57.52	32.34	1000.0	L1	ON	10.0
0.518625	---	26.58	46.00	19.42	1000.0	N	ON	10.1
0.841698	24.63	---	56.00	31.37	1000.0	N	ON	9.9
0.952544	---	20.78	46.00	25.22	1000.0	N	ON	9.9
1.904779	---	17.60	46.00	28.40	1000.0	N	ON	9.8
2.003779	21.30	---	56.00	34.70	1000.0	N	ON	9.8
2.941412	---	13.96	46.00	32.04	1000.0	N	ON	9.8
3.556191	20.40	---	56.00	35.60	1000.0	N	ON	9.8
27.989184	24.17	---	60.00	35.83	1000.0	N	ON	10.3
28.012897	---	13.40	50.00	36.60	1000.0	L1	ON	10.2

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**Test photo**

See the Pic1~3 in document" I21W00017\_JAB".

**Annex A External Photos**

See the document" I21W00017 -External Photos".

**Annex B Internal Photos**

See the document" I21W00017 -Internal Photos".

**ANNEX C Deviations from Prescribed Test Methods**

No deviation from Prescribed Test Methods.

\_\_\_\_\_ **The End of this Report** \_\_\_\_\_

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