MPE TEST REPORT

Applicant	:	DewertOkin Technology Group Co., Ltd.
Address of Applicant	:	Room 247, Floor 6, Jiaxing Photovoltaic Science and Innovation Park, 1288 Kanghe Road Xiuzhou District,Jiaxing City, Zhejiang Province China
Product Name	:	REMOTE CONTROL
Brand Name	:	N/A
Model No.	:	RF58, RF62
Sample Acquisition Method	:	Sent by Client
Sample No.	:	E23020016-01#02
FCC ID	:	2AVJ8-RF58
ISED Number	:	25804-RF58
Standards	:	FCC Part 2.1093 RSS-102 (Issue 5, Amd.1-February 2, 2021)
Date of Receipt	:	2023-02-03
Date of Test	:	2023-02-07 ~ 2023-02-21
Date of Issue	:	2023-03-03

Remark:

This report details the results of the testing carried out on one sample, the results contained in this report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

Prepared by: Erik. Yang (Erik Yang) Reviewed by: Jennifer Zhou (Jennifer Zhou) Approved by: Guoyou Chi (Authorized signatory: Guoyou Chi)

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1 General Information

1.1 Testing Laboratory

ISED CAB identifier #	CN0081
Company Name	ICAS Testing Technology Services (Shanghai) Co., Ltd.
Address	No.1298, Pingan Road, Minhang District, Shanghai, China
Telephone	0086 21-51682999
Fax	0086 21-54711112
Homepage	www.icasiso.com

1.2 Environmental conditions

Temperature (°C)	18-25
Humidity (%RH)	40-65
Barometric Pressure (mbar)	960-1060
Ambient noise & Reflection（W/kg）	< 0.012

1.3 Details of Application

Applicant Company Name	DewertOkin Technology Group Co., Ltd.
Address	Room 247, Floor 6, Jiaxing Photovoltaic Science and Innovation Park, 1288 Kanghe Road Xiuzhou District,Jiaxing City, Zhejiang Province China
Contact Person	Mia Ye
Telephone	+86-573-82281072
Email	Mia.Ye@refinedchina.com
Manufacturer Company Name	DewertOkin Technology Group Co., Ltd.
Address	Room 247, Floor 6, Jiaxing Photovoltaic Science and Innovation Park, 1288 Kanghe Road Xiuzhou District,Jiaxing City, Zhejiang Province China
Factory Company Name	DewertOkin Technology Group Co., Ltd.
Address	No.1507, Taoyuan Road, Gaozhao Street, Xiuzhou District, Jiaxing City, Zhejiang Province, China.

1.4 Details of EUT

Product Name	REMOTE CONTROL
Brand Name	N/A
Test Model No.	RF58
Series Model No.	RF62
Difference Description	All the same except for the model name, enclosure and appearance color(the black color is RF58 model ,the white color is RF62 model). Refer to the sample photo for details.
FCC ID	2AVJ8-RF58
ISED Number	25804-RF58
Operation Frequency	2403MHz ~ 2480MHz
Modulation Type	GFSK
Antenna Type	PCB Antenna
Antenna Gain	1.225dBi
Hardware version	R5.109.00.1025A
Software version	V1.0

2 Assessment methods

For FCC

According to 447498 D01 General RF Exposure Guidance v06

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

Where f(GHz) is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

For IC

According with section 2.5.1 of RSS-102 Issue 5, SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table.

Exemption Limits (mW)					
Frequency (MHz)	At separation distance of ≤5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤300	71 mW	101 mW	132 mW	162 mW	193 mW
450	52 mW	70 mW	88 mW	106 mW	123 mW
835	17 mW	30 mW	42 mW	55 mW	67 mW
1900	7 mW	10 mW	18 mW	34 mW	60 mW
2450	4 mW	7 mW	15 mW	30 mW	52 mW
3500	2 mW	6 mW	16 mW	32 mW	55 mW
5800	1 mW	6 mW	15 mW	27 mW	41 mW
Frequency (MHz)	At separation distance of 30 mm	At separation duistance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of ≥50 mm
≤300	223 mW	254 mW	284 mW	315 mW	345 mW
450	141 mW	159 mW	177 mW	195 mW	213 mW
835	80 mW	92 mW	105 mW	117 mW	130 mW
1900	99 mW	153 mW	225 mW	315 mW	431 mW
2450	83 mW	123 mW	173 mW	235 mW	309 mW
3500	86 mW	124 mW	170 mW	225 mW	290 mW
5800	56 mW	71 mW	85 mW	97 mW	106 mW

Test Data

Mode	2403MHz ~ 2480MHz
	GFSK
Field strength (dBuV/m)	78.14
Peak Power (dBm)	-17.06
Note: This report listed the worst case value, please refer to RF test Report No. SHE23020016-02AE Test Result Radiated Emission 4.1.2.	

Tune-up power

Mode	Power Range (dBm)
2403MHz ~ 2480MHz	(-17.50) – (-16.50)

FCC

Frequency Band (MHz)	Tune-up Power (dBm)	Tune-up Power (mW)	Separation Distance (mm)	Value	Exclusion Thresholds
2403-2480	-16.50	0.0224	5	0.00694	3.0

For IC: RSS-102 section 2.5.1 Exemption Limits for Routine Evaluation, Table 1 shows the SAR evaluation for a device with a separation distance of 5 mm at 2450 MHz is 4 mW, which is 6 dBm >-16.50 dBm,so SAR testing is not required for IC.

3 Conclusion

For FCC,Per KDB 447498 D01v06, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. The test exclusion threshold is <3.0, SAR testing is not required. RF exposure Evaluation Results: Compliance

For IC: RSS-102 section 2.5.1 Exemption Limits for Routine Evaluation, Table 1 shows the SAR evaluation for a device with a separation distance of 5 mm at 2450 MHz is 4 mW, which is 6 dBm >-16.50 dBm,so SAR testing is not required.

4 Appendixes

4.1 Sample Photograph

Test Model: RF58

Front of the sample

Back of the sample

Left of the sample

Right of the sample

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Top of the sample

Bottom of the sample

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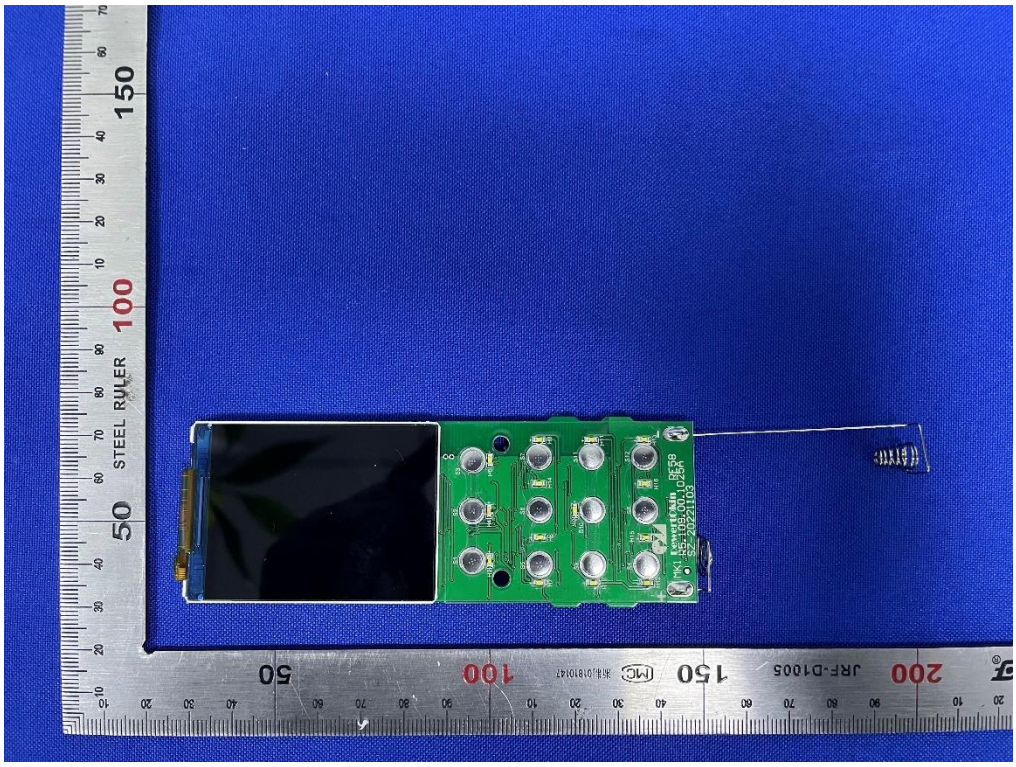
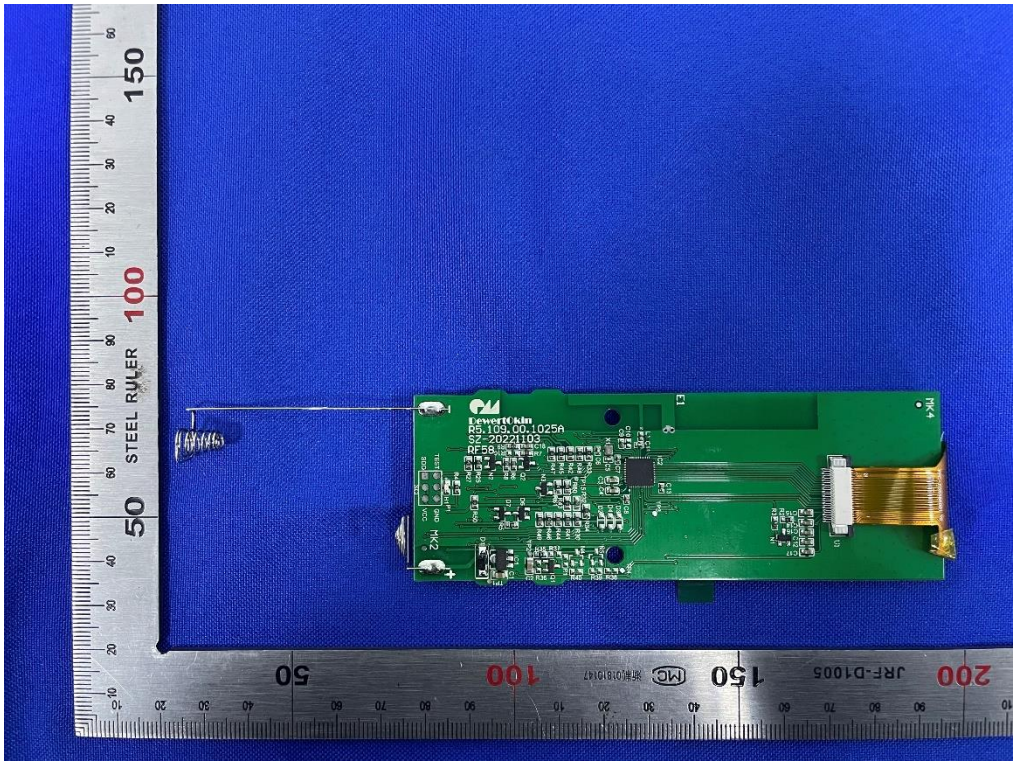
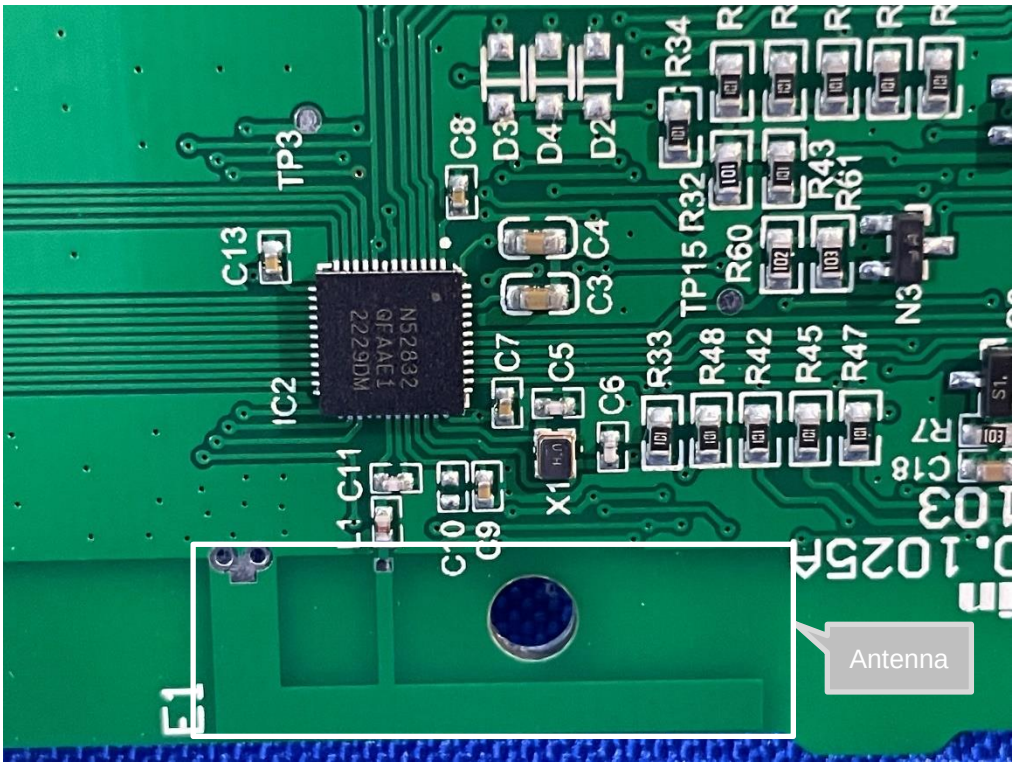
Open of the sample



Internal-1 of the sample



Internal-2 of the sample



Antenna position of the sample

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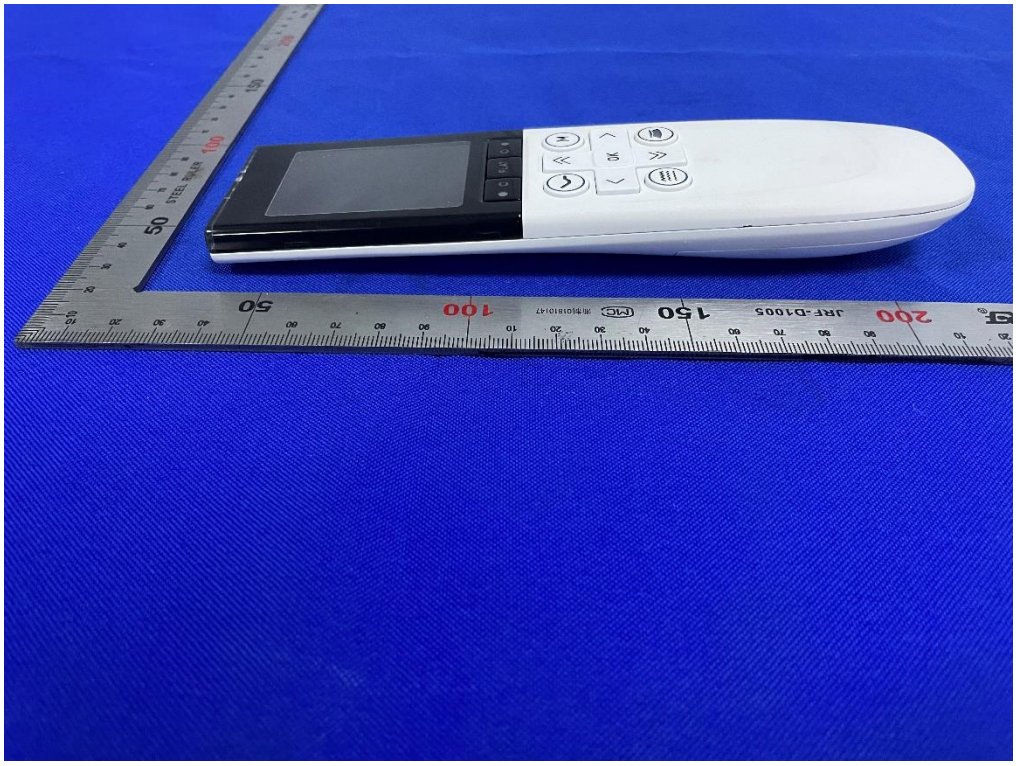
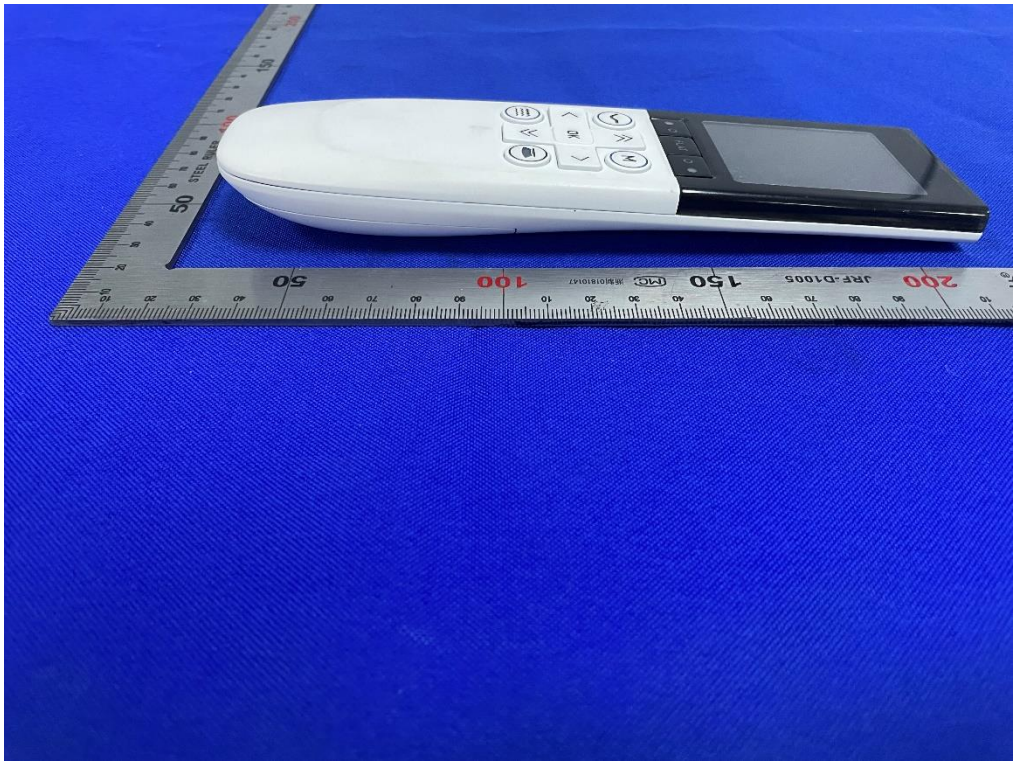
Series Model: RF62

Front of the sample

Back of the sample

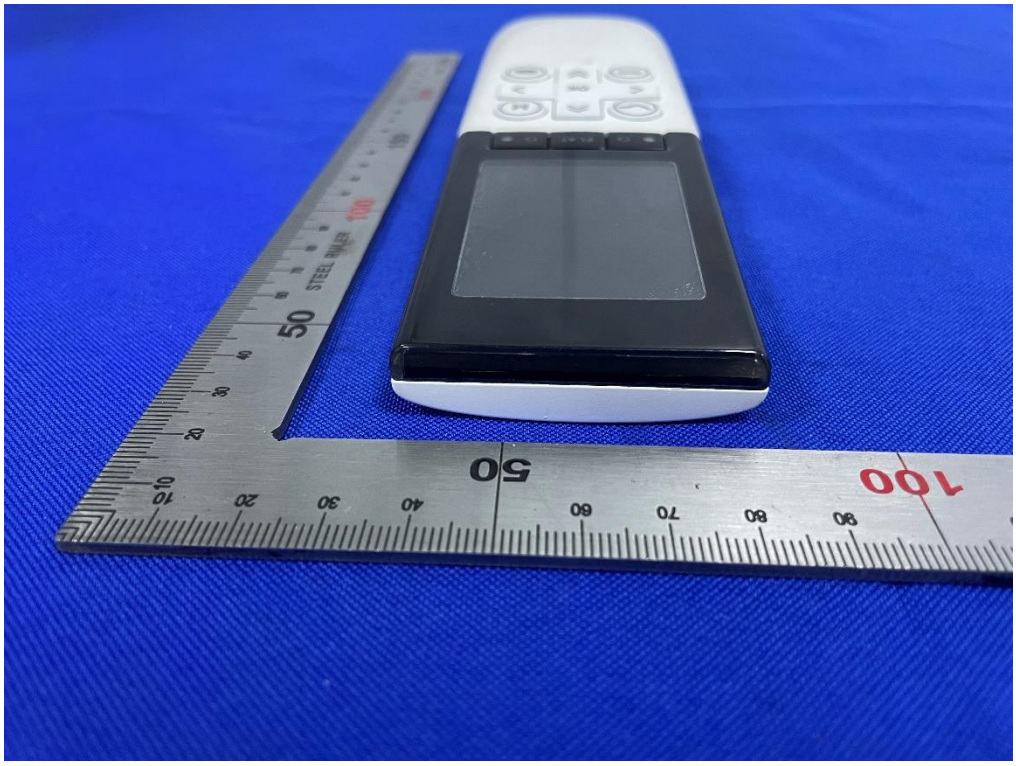


Left of the sample



Right of the sample

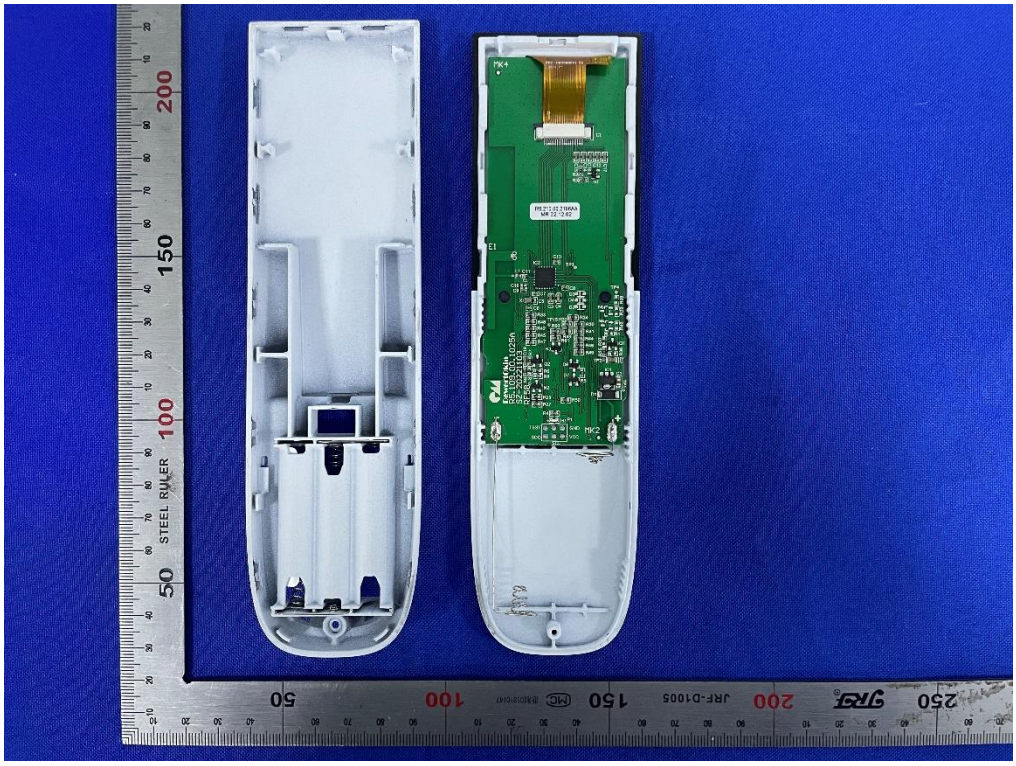
MPE TEST REPORT



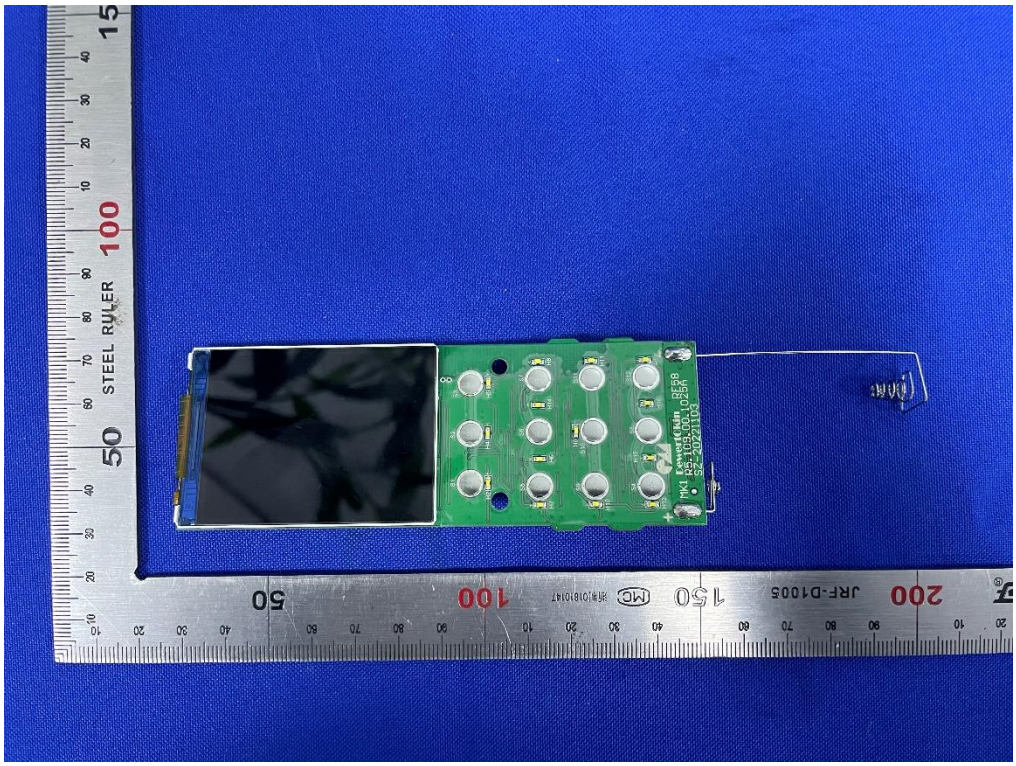
Top of the sample

Bottom of the sample

MPE TEST REPORT



Open of the sample



Internal-1 of the sample

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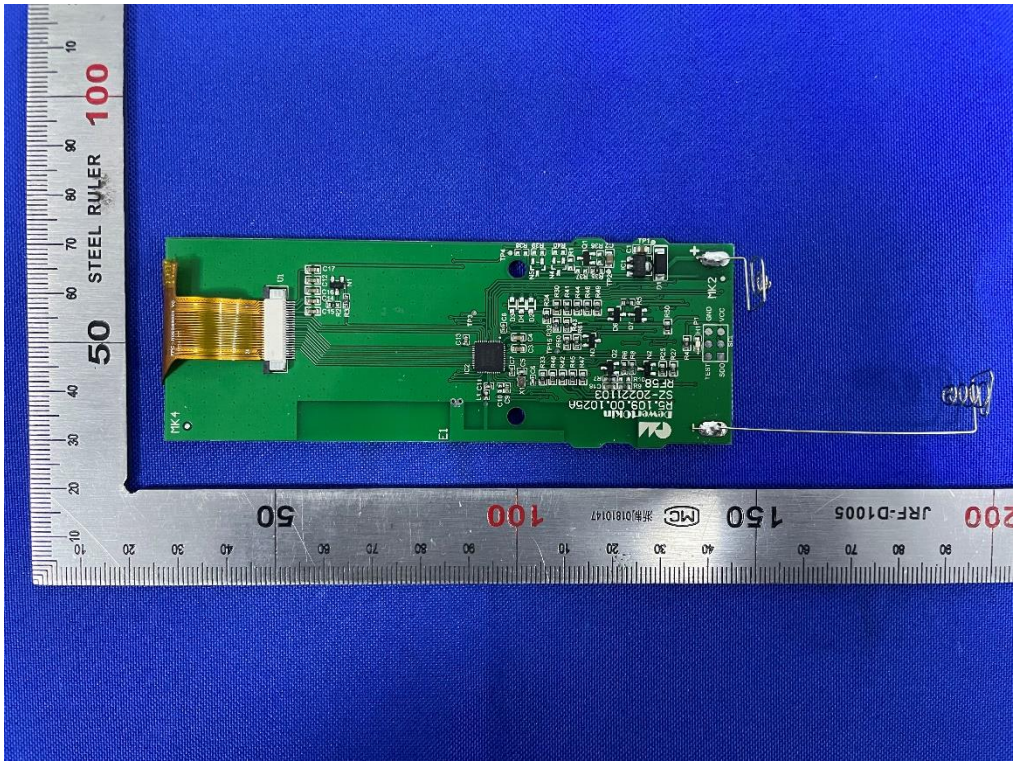
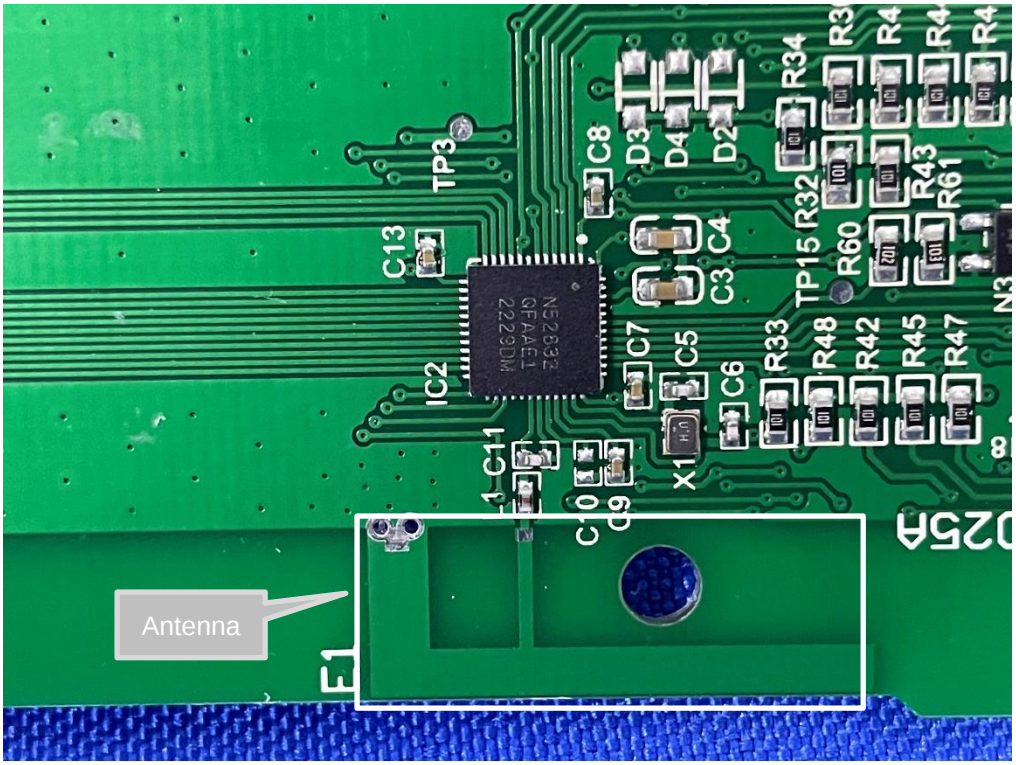


Internal-2 of the sample



Antenna position of the sample

End of the report