



The following sample(s) was/were submitted and identified on behalf of the client as:

<b>TEST REPORT</b>	
<b>Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces (EN ISO: 13732-1: 2008, ISO 13732-1:2006)</b>	
Report Reference No.....:	GZES191102767241
Tested by (name + signature) .....	Chico Li 
Approved by (+ signature) .....	Anlay Dong 
Date of issue.....:	2020-01-07
Total number of pages.....:	13
Testing Laboratory.....:	SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch
Address.....:	198 Kezhu Road, Science City, Economic & Technology Development Area, Guangzhou, Guangdong, China
Applicant's name .....	Hangzhou Hikvision Digital Technology Co., Ltd.
Address.....:	No.555 Qianmo Road, Binjiang District, Hangzhou 310052, China
Test specification:	
Test procedure .....	Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces (EN ISO: 13732-1: 2008, ISO 13732-1:2006)
Non-standard test method.....:	None
Test Report Form No.....:	EN13732-1_A
Test Report Form(s) Originator .....	SGS-CSTC
Master TRF.....:	2018-04-03
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Test item description.....:	Network Camera
Model/Type reference.....:	<p>DS-2XM6112G0-I/ND, DS-2XM6112G0-I/NDUHK,  DS-2XM6112G0-I/NDCKV, DS-2XM6112G0-I/NDUVS,  DS-2XM6112G0-I/NDKVO, DS-2XM6112G0-I/NDHUN,  DS-2XM6112G0-IM/ND, DS-2XM6112G0-IM/NDUHK,  DS-2XM6112G0-IM/NDCKV, DS-2XM6112G0-IM/NDUVS,  DS-2XM6112G0-IM/NDKVO, DS-2XM6112G0-IM/NDHUN,  DS-2XM6122G0-I/ND, DS-2XM6122G0-I/NDUHK,  DS-2XM6122G0-I/NDCKV, DS-2XM6122G0-I/NDUVS,  DS-2XM6122G0-I/NDKVO, DS-2XM6122G0-I/NDHUN,  DS-2XM6122G0-IM/ND, DS-2XM6122G0-IM/NDUHK,  DS-2XM6122G0-IM/NDCKV, DS-2XM6122G0-IM/NDUVS,  DS-2XM6122G0-IM/NDKVO, DS-2XM6122G0-IM/NDHUN,  DS-2XM6112FWD-I/ND, DS-2XM6112FWD-I/NDUHK,  DS-2XM6112FWD-I/NDCKV, DS-2XM6112FWD-I/NDUVS,  DS-2XM6112FWD-I/NDKVO, DS-2XM6112FWD-I/NDHUN,  DS-2XM6112FWD-IM/ND, DS-2XM6112FWD-IM/NDUHK,  DS-2XM6112FWD-IM/NDCKV, DS-2XM6112FWD-IM/NDUVS,  DS-2XM6112FWD-IM/NDKVO, DS-2XM6112FWD-IM/NDHUN,  DS-2XM6122FWD-I/ND, DS-2XM6122FWD-I/NDUHK,  DS-2XM6122FWD-I/NDCKV, DS-2XM6122FWD-I/NDUVS,  DS-2XM6122FWD-I/NDKVO, DS-2XM6122FWD-I/NDHUN,  DS-2XM6122FWD-IM/ND, DS-2XM6122FWD-IM/NDUHK,  DS-2XM6122FWD-IM/NDCKV, DS-2XM6122FWD-IM/NDUVS,  DS-2XM6122FWD-IM/NDKVO, DS-2XM6122FWD-IM/NDHUN</p>

Ratings.....	PoE (36 Vd.c. – 57 Vd.c.); 0,2 – 0,1A; 5 W
Brand name .....	HIKVISION
Manufacturer.....	Same as applicant
Factory .....	Hangzhou Hikvision Technology Co., Ltd. No.700, Dongliu Road, Binjiang District, Hangzhou Ctiy, Zhejiang, 310052, China  Hangzhou Hikvision Electronics Co., Ltd. No.299, Qiushi Road, Tonglu Economic Development Zone, Tonglu County, Hangzhou, Zhejiang, 310052, China  Chongqing Hikvision technology Co., Ltd. No. 118, Haikang Road, Area C, Jianqiao Industrial Park, Dadukou District, Chongqing, 401325, China

Summary of testing:

The sample(s) in this report for assessment of risk of burning, The sample(s) tested complies with the requirements of Methods for the assessment of human responses to contact with surfaces (EN ISO: 13732-1: 2008, ISO 13732-1:2006)

When determining the test conclusion, the Measurement Uncertainty of test has been considered.

Model DS-2XM6112G0-I/ND was selected for test as representative.

Stabilized PoE power source was used for test.

Test for assessment of risk of burning.

The max. recommended temperature is 55 °C by manufacturer.

Tests performed:

Selected verdict	Sub-clause	Test name
<input checked="" type="checkbox"/>	5	Assessment of risk of burning

Copy of marking plate



Remark: the above marking plate is only a draft artwork to show the product ratings and model No.

Marking for other models are the same except model number.

Possible test case verdicts:	
- test case does not apply to the test object .....: N (or N/A)	
- test object does meet the requirement .....: P (Pass)	
- test object does not meet the requirement .....: F (Fail)	
Testing .....	
Date of receipt of test item .....: 2019-11-22	
Date (s) of performance of tests .....: 2019-12-12 to 2019-12-13	
General remarks:	
<p>The test results presented in this report relate only to the object tested.          This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.          "(see Enclosure #)" refers to additional information appended to the report.          "(see appended table)" refers to a table appended to the report.</p> <p>Throughout this report a comma is used as the decimal separator.</p> <p>This document is issued by the Company subject to its General Conditions of Service, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.</p>	
General product information:	
Function:	Network Camera main function is collecting real-time video signals, Power by stabilized PoE then through Signal terminal transmission to PC online surveillance
Power Source:	Stabilized Power over Ethernet
Installation:	Used on rolling stock inside railway vehicles, body mounted
Construction:	Metal enclosure fixed by screws
<b>Model differences:</b>	
All models are identical except model name and software version.	

Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces (EN ISO: 13732-1: 2008)			
Cl.	Requirement-Test	Result-Remark	Verdict
<b>4</b>	<b>Burn thresholds</b>		—
4.1	General		P
4.2	Burn threshold data		P
4.2.1	Burn thresholds for contact periods between 0,5 s and 10 s		P
4.2.1.1	General		P
4.2.1.2	Uncoated metals		N/A
4.2.1.3	Coated metals	The product surface is coated metal, coated by powder (60 µm)	P
4.2.1.4	Ceramics, glass and stone materials		N/A
4.2.1.5	Plastics	Camera cover	P
4.2.1.6	Wood		N/A
4.2.2	Burn thresholds for contact periods between 10 s and 1 min	Contact periods less than 10 s	N/A
4.2.3	Burn thresholds for contact periods of 1 min and longer	Contact periods less than 10 s	N/A

<b>5</b>	<b>Assessment of risk of burning</b>		—
5.1	Procedure		P
5.2	Identification of hot, touchable surfaces		P
5.3	Task analysis		P
5.4	Measurements of surface temperatures	Maximum surface temperature of coated metal: 59,5 °C Maximum surface temperature of plastic: 58,2 °C	P
5.4.1	Procedure		P
5.4.2	The measuring apparatus		P
5.5	Choice of applicable burn threshold value		P
5.5.1	Procedure		P

5.5.2	Determination of contact period	Contact periods less than 1 s	P
5.5.3	Selection of the burn threshold	69-74 °C for coated metal 85-93 °C for plastic	P
5.6	Comparison of surface temperature and burn threshold	The surface temperature is below the burn threshold.	P
5.7	Determination of risk of burning		P
5.7.1	Surface temperature above the burn threshold		N/A
5.7.2	Surface temperature within the burn threshold value spread		N/A
5.7.3	Surface temperature below the burn threshold	There is in general no risk of burning	P
5.8	Repetition		N/A

<b>6</b>	<b>Protective measures</b>		--
6.1	General		N/A
6.2	No risk of burning		P
6.3	Risk of burning		N/A

<b>7</b>	<b>Guidance for setting surface temperature limit values</b>		--
7.1	Procedure		P
7.2	Assessment of risk of burning		P
7.3	Decision upon protective measures		N/A
7.4	Selection of appropriate values		P
7.5	Setting of surface temperature limit value		P
7.5.1	Contact period between 0,5 s and 1 min		P
7.5.2	Contact period of 1 min and longer		N/A

**Data table**

<b>Assessment of risk of burning</b>			
<b>Product information</b> (according to 5.2)	the soleplate/ the handle/the intermediate area/ other (detail)	the soleplate/ the handle/the intermediate area	the soleplate/ the handle/the intermediate area
Assessed surface:	Metal enclosure surface	Plastic cover	--
Accessibility:	Easily touchable	Easily touchable	--
Temperature estimation:	Moderate	Moderate	--
Surface material:	Metal, coated by powder (60 µm)	Plastic	--
Texture of the surface:	Smooth	Smooth	--
Operating conditions:	Power by PoE (36 Vd.c.), Unit operation under maximum normal load	Power by PoE (36 Vd.c.), Unit operation under maximum normal load	--
<b>Task analysis</b> (according to 5.3)	--	--	--
Surface which is or may be touched:	All Surface	All Surface	--
Intentional or unintentional touching:	Unintentional	Unintentional	--
Persons who contact or may contact:	Adults	Adults	--
Duration of contact:	1 s for healthy adults	1 s for healthy adults	--
Probability of unintentional touching: ↓	Low during operation	Low during operation	--
Frequency of intentional touching:	0	0	--
<b>Measurement of surface temperature</b> (according to 5.4)	59,5 °C	58,2 °C	--
<b>Choice of applicable burn threshold</b> (according to 5.5)	69 °C - 74 °C	85 °C - 93 °C	--
<b>Comparison and conclusion</b> (according to 5.6)	Below the burn threshold	Below the burn threshold	--
<b>Result of risk assessment</b> (according to 5.7)	No risk of burning	No risk of burning	--
<b>Application of protective measures</b> (according to Clause 6)	N/A	N/A	--

<b>Assessment of risk of burning</b>			
<b>Product information</b> (according to 5.2)	the soleplate/ the handle/the intermediate area/ other (detail)	the soleplate/ the handle/the intermediate area	the soleplate/ the handle/the intermediate area
Assessed surface:	Metal enclosure surface	Plastic cover	--
Accessibility:	Easily touchable	Easily touchable	--
Temperature estimation:	Moderate	Moderate	--
Surface material:	Metal, coated by powder (60 µm)	Plastic	--
Texture of the surface:	Smooth	Smooth	--
Operating conditions:	Power by PoE (57 Vd.c.), Unit operation under maximum normal load	Power by PoE (57 Vd.c.), Unit operation under maximum normal load	--
<b>Task analysis</b> (according to 5.3)	--	--	--
Surface which is or may be touched:	All Surface	All Surface	--
Intentional or unintentional touching:	Unintentional	Unintentional	--
Persons who contact or may contact:	Adults	Adults	--
Duration of contact:	1 s for healthy adults	1 s for healthy adults	--
Probability of unintentional touching: ↓	Low during operation	Low during operation	--
Frequency of intentional touching:	0	0	--
<b>Measurement of surface temperature</b> (according to 5.4)	58,0 °C	57,5 °C	--
<b>Choice of applicable burn threshold</b> (according to 5.5)	69 °C - 74 °C	85 °C - 93 °C	--
<b>Comparison and conclusion</b> (according to 5.6)	Below the burn threshold	Below the burn threshold	--
<b>Result of risk assessment</b> (according to 5.7)	No risk of burning	No risk of burning	--
<b>Application of protective measures</b> (according to Clause 6)	N/A	N/A	--

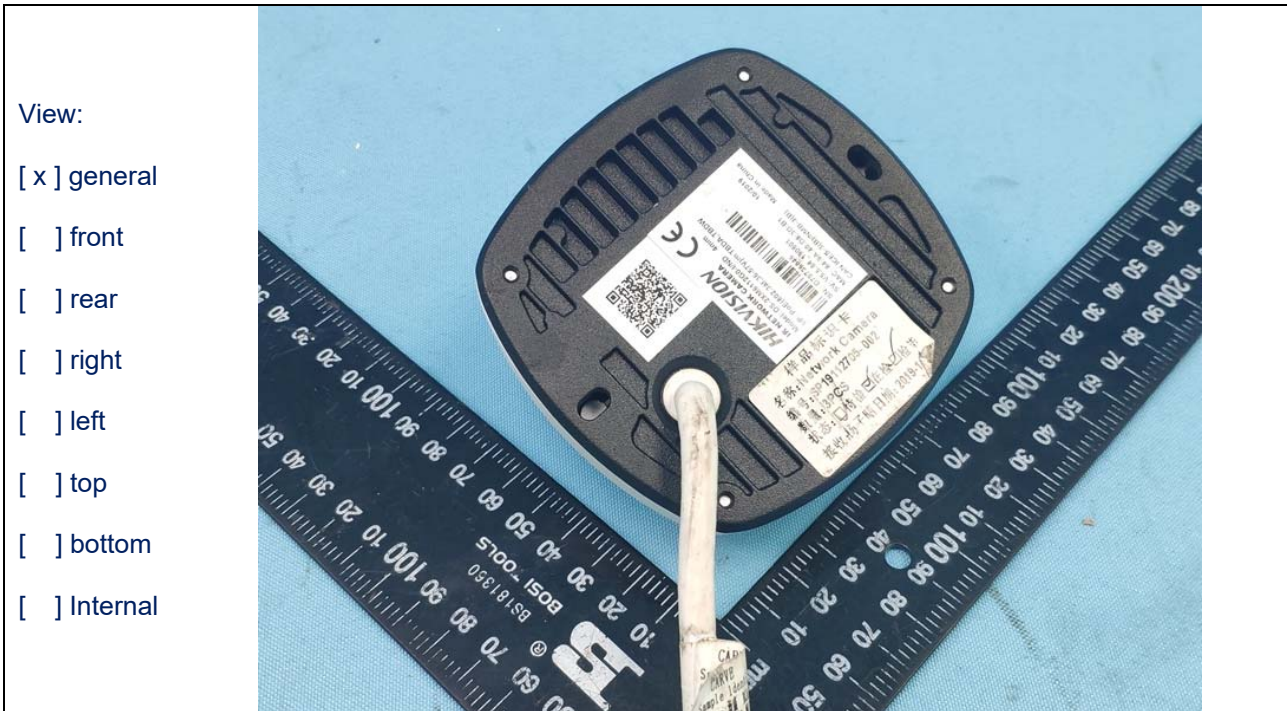


**Photo documents:**

Details of:



Details of:



Details of:



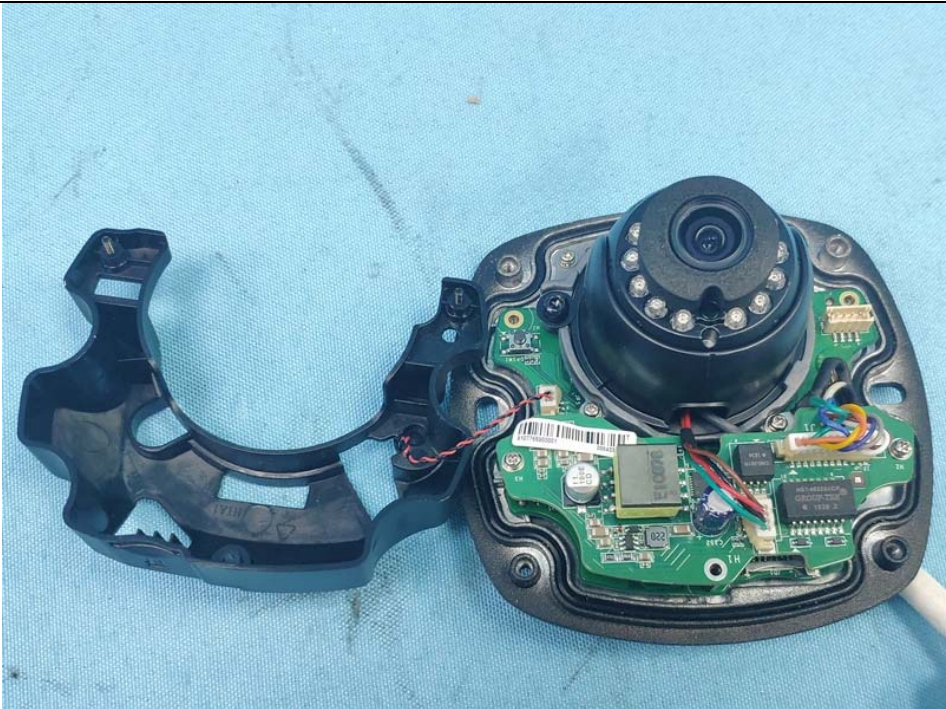
Details of:



Details of:

View:

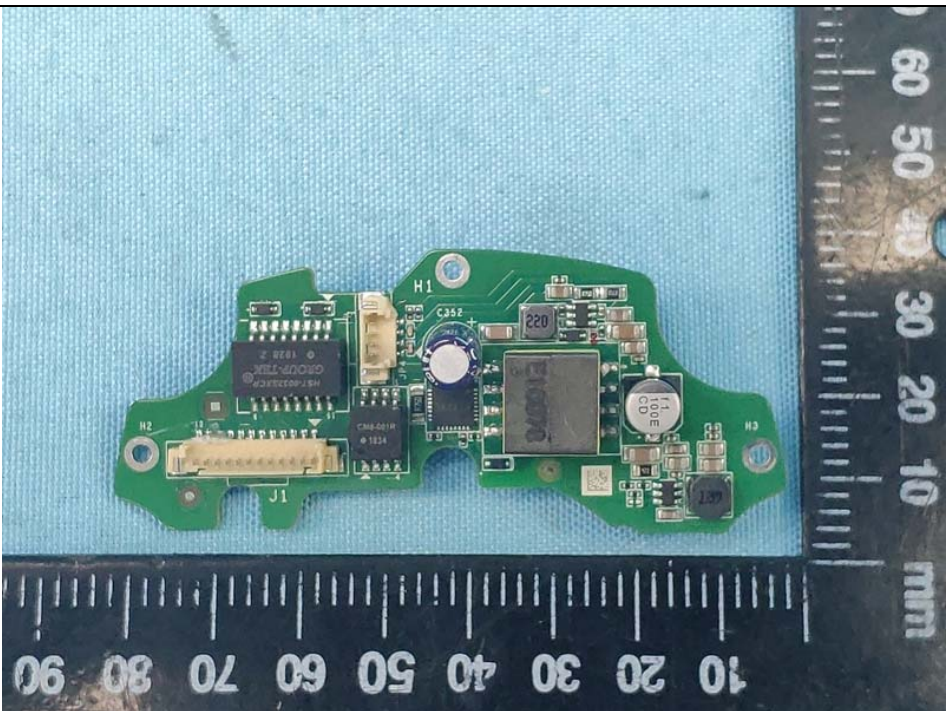
- general
- front
- rear
- right
- left
- top
- bottom
- Internal



Details of: PWB

View:

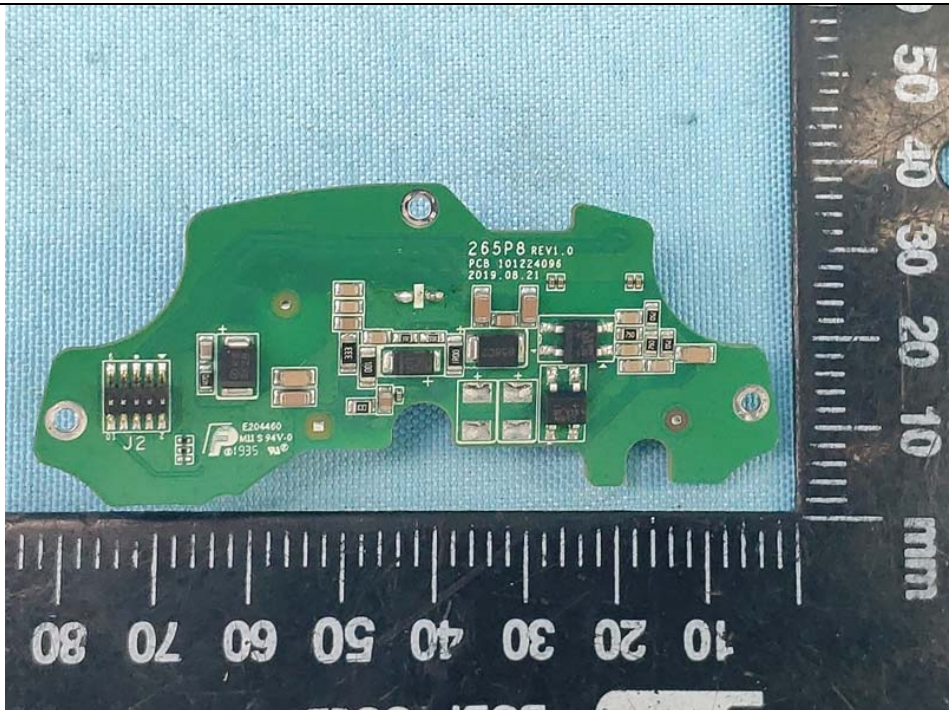
- general
- front
- rear
- right
- left
- top
- bottom
- Internal



Details of: PWB

View:

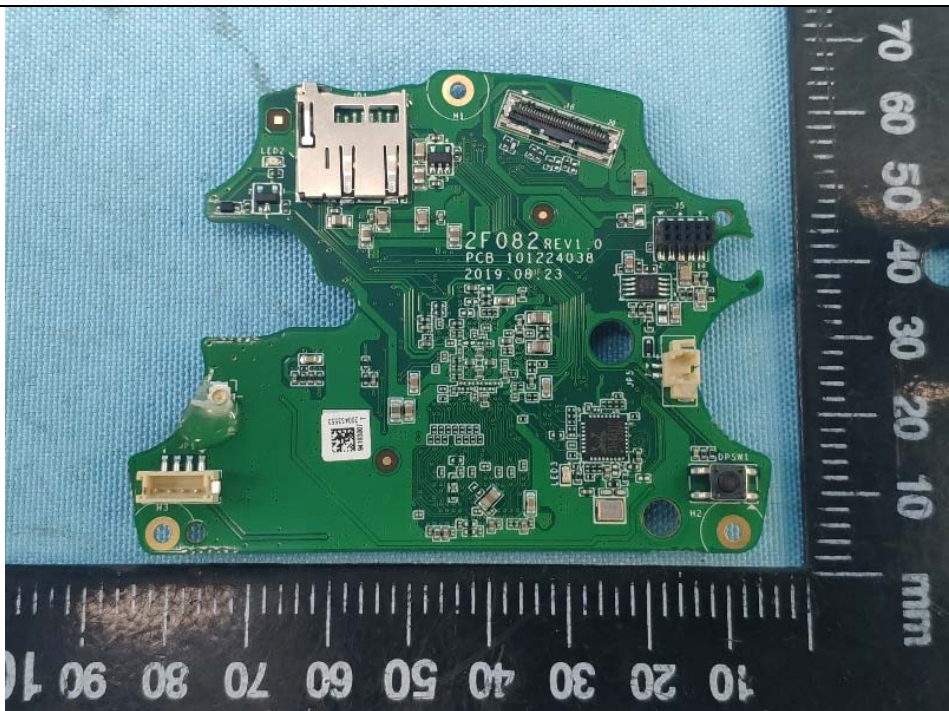
- general
- front
- rear
- right
- left
- top
- bottom
- Internal



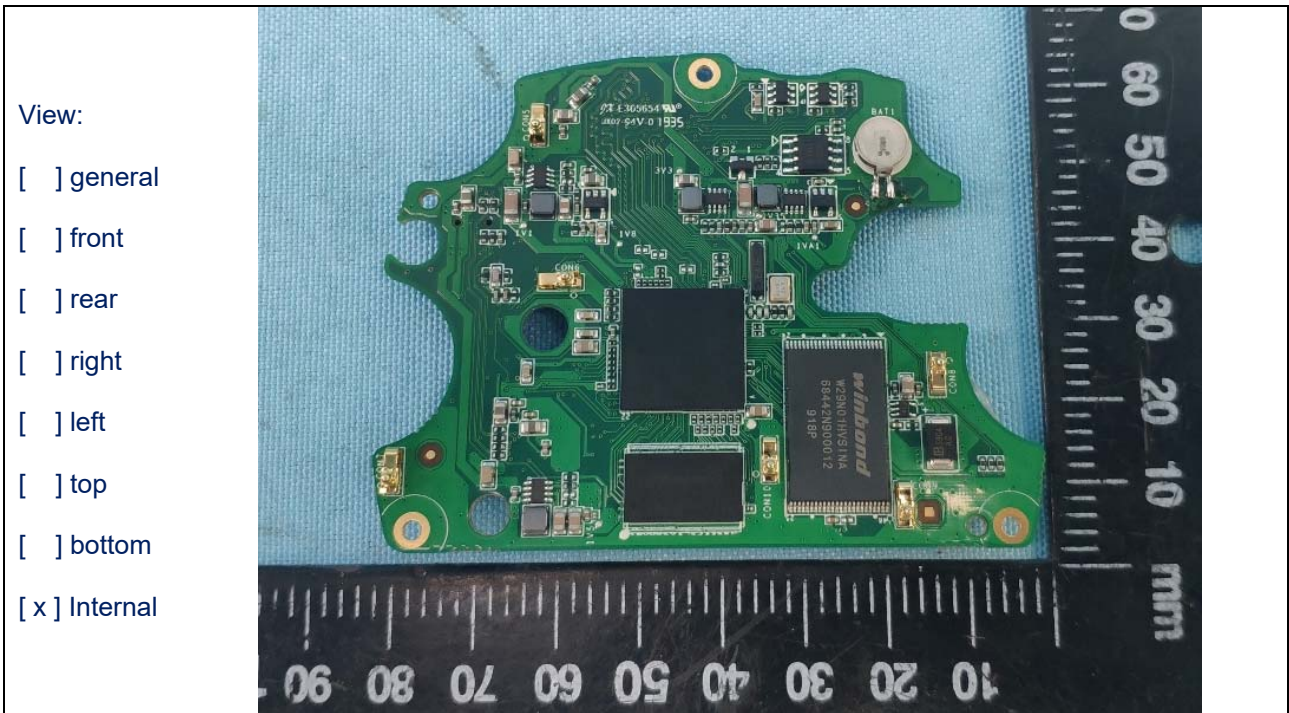
Details of: PWB

View:

- general
- front
- rear
- right
- left
- top
- bottom
- Internal



Details of: PWB



--- End of Report ---