

Applicant: GLORY STAR TECHNICS (SHENZHEN) CO., LTD.

Product: Commercial Kiosk Tablet

Model No.: NEB101

Trademark: Glory Star

Test Standards: FCC Part 15.249

Test result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.10 & FCC Part 15 Subpart C,

Paragraph 15.249 regulations for the evaluation of

electromagnetic compatibility

Approved By

Terry Tang

Manager

Dated: October 09, 2022

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

## SHENZHEN TIMEWAY TESTING LABORATORIES

Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le Village, Nanshan District, Shenzhen, China

Tel (755) 83448688, Fax (755) 83442996, E-Mail:info@timeway-lab.com



Report No.: TW2208395-01E Page 2 of 65

Date: 2022-10-09



# **Special Statement:**

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

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

## **CNAS-LAB Code: L2292**

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of testing Laboratories.

## FCC-Registration No.: 744189

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 744189.

# Industry Canada (IC) — Registration No.:5205A

The EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5205A.

## A2LA (Certification Number: 5013.01)

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number:5013.01

Date: 2022-10-09



# Test Report Conclusion

#### Content

1.0	General Details	4
1.1	Test Lab Details	4
1.2	Applicant Details	4
1.3	Description of EUT	4
1.4	Submitted Sample	4
1.5	Test Duration.	5
1.6	Test Uncertainty	5
1.7	Test By	5
2.0	List of Measurement Equipment	6
3.0	Technical Details	7
3.1	Summary of Test Results	7
3.2	Test Standards	7
4.0	EUT Modification	7
5.0	Power Line Conducted Emission Test.	8
5.1	Schematics of the Test	8
5.2	Test Method and Test Procedure	8
5.3	Configuration of the EUT	8
5.4	EUT Operating Condition	9
5.5	Conducted Emission Limit	9
5.6	Test Result	9
6.0	Radiated Emission test	12
6.1	Test Method and Test Procedure	12
6.2	Configuration of the EUT	13
6.3	EUT Operation Condition	13
6.4	Radiated Emission Limit	13
6.5	Test Result	15
7.0	Band Edge	23
7.1	Test Method and Test Procedure	23
7.2	Radiated Test Setup.	23
7.3	Configuration of the EUT	23
7.4	EUT Operating Condition.	23
7.5	Band Edge Limit.	23
7.6	Band Edge Test Result.	24
8.0	Antenna Requirement	28
9.0	20dB bandwidth measurement.	29
10.0	FCC ID Label	38
11.0	Photo of Test Setup and EUT View.	39

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Date: 2022-10-09

Report No.: TW2208395-01E



#### 1.0 General Details

#### 1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le

Village, Nanshan District, Shenzhen, China

Telephone: (755) 83448688 Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 744189 For 3m Anechoic Chamber

## 1.2 Applicant Details

Applicant: GLORY STAR TECHNICS (SHENZHEN) CO., LTD.

Address: Bldg., 9, 4/F., Zong Yuntai Technology Industrial Park, Songbai Road, Shiyan Street, Boan,

Shenzhen, China

Telephone: (0755)-26001808-305 Fax: (0755)-26002933

#### 1.3 Description of EUT

Product: Commercial Kiosk Tablet

Manufacturer: GLORY STAR TECHNICS (SHENZHEN) CO., LTD.

Address: Bldg., 9, 4/F., Zong Yuntai Technology Industrial Park, Songbai Road, Shiyan

Street, Boan, Shenzhen, China

Trademark: Glory Star Model Number: NEB101 Additional Model Name N/A

Rating: Input: 12V, 1.2A, 14.4W Max Switching Adapter: Model: FJ-SW20181202000D

Input: 100-240V~, 50/60Hz, 1.5A Max; Output:12V, 2.0A, 24W

Modulation Type: GFSK,  $\pi$  /4DQPSK, 8DPSK

Operation Frequency: 2402-2480MHz

Channel Number: 79
Channel Separation: 1MHz
Hardware Version: V1.3

Software Version: Android 9.0 Serial No.: GS101220600001

Antenna Designation FPC antenna with gain 2.11dBi Max (Get from the antenna specification)

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Report No.: TW2208395-01E Page 5 of 65

Date: 2022-10-09



1.4 Submitted Sample: 2 Samples

1.5 Test Duration

2022-08-25 to 2022-10-09

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB

Radiated Emissions below 1GHz Uncertainty =4.7dB

Radiated Emissions above 1GHz Uncertainty =6.0dB

Conducted Power Uncertainty =6.0dB

Occupied Channel Bandwidth Uncertainty = 5%

Conducted Emissions Uncertainty = 3.6dB

Note: The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

1.7 Test Engineer

The sample tested by

Print Name: Andy Xing

Page 6 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



2.0 Test Equipment									
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date				
ESPI Test Receiver	R&S	ESPI 3	100379	2022-07-15	2023-07-14				
LISN	R&S	EZH3-Z5	100294	2022-07-18	2023-07-17				
LISN	R&S	EZH3-Z5	100253	2022-07-18	2023-07-17				
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2022-07-18	2023-07-17				
Loop Antenna	EMCO	6507	00078608	2022-07-18	2025-07-17				
Spectrum	R&S	FSIQ26	100292	2022-07-15	2023-07-14				
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2022-07-18	2025-07-17				
Horn Antenna	R&S	BBHA 9120D	9120D-631	2022-07-18	2024-07-17				
Power meter	Anritsu	ML2487A	6K00003613	2022-07-18	2023-07-17				
Power sensor	Anritsu	MA2491A	32263	2022-07-18	2023-07-17				
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2022-07-18	2025-07-17				
9*6*6 Anechoic			N/A	2022-07-26	2025-07-25				
EMI Test Receiver	RS	ESVB	826156/011	2022-07-15	2023-07-14				
EMI Test Receiver	RS	ESCS 30	834115/006	2022-07-15	2023-07-14				
Spectrum	HP/Agilent	E4407B	MY50441392	2022-07-15	2023-07-14				
Spectrum	RS	FSP	1164.4391.38	2022-07-15	2023-07-14				
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA	-	2022-07-15	2023-07-14				
RF Cable	Zhengdi	7m		2022-07-15	2023-07-14				
Pre-Amplifier	Schwarebeck	BBV9743	#218	2022-07-15	2023-07-14				
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2022-07-15	2023-07-14				
LISN	SCHAFFNER	NNB42	00012	2022-08-18	2023-07-17				
ESPI Test Receiver	R&S	ESPI 3	100379	2022-07-15	2023-07-14				
LISN	R&S	EZH3-Z5	100294	2022-07-18	2023-07-17				

## 2.1 Automation Test Software

# For Conducted Emission Test

Name	Version
EZ-EMC	Ver.EMC-CON 3A1.1

## For Radiated Emissions

Name	Version		
EMI Test Software BL410-EV18.91	V18.905		
EMI Test Software BL410-EV18.806 High Frequency	V18.06		

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Page 7 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



#### 3.0 Technical Details

## 3.1 Summary of test results

The EUT has been tested according to the following specifications:

Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.203	Antenna Requirement	Pass	Complies
FCC Part 15, Paragraph 15.207	Conducted Emission Test	Pass	Complies
FCC Part 15 Subpart C Paragraph 15.249(a) & 15.249(b) Limit	Field Strength of Fundamental	Pass	Complies
FCC Part 15, Paragraph 15.209	Radiated Emission Test	Pass	Complies
FCC Part 15 Subpart C Paragraph 15.249(d) Limit	Band Edge Test	Pass	Complies

#### 3.2 Test Standards

FCC Part 15 Subpart C, Paragraph 15.249, ANSI C63.4:2014 and ANSI C63.10:2013

#### 4.0 EUT Modification

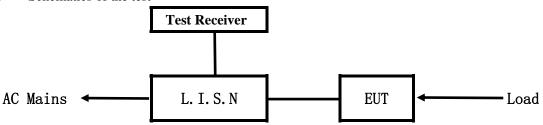
No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

Date: 2022-10-09



#### 5. Power Line Conducted Emission Test

#### 5.1 Schematics of the test

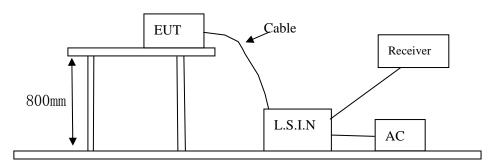


**EUT: Equipment Under Test** 

#### 5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2014. The Frequency spectrum from 0.15MHz to 30MHz was investigated. The LISN used was 500hm/50uH as specified by section 5.1 of ANSI C63.4 -2014.

Test Voltage: 120V~, 60Hz Block diagram of Test setup



## 5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.4-2014. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

79 channels are provided to the EUT

#### A. EUT

Device	Manufacturer	Model	FCC ID	
Commercial Kiosk Tablet	GLORY STAR TECHNICS	NIED 101	24 ACC MED 101	
	(SHENZHEN) CO., LTD.	NEB101	2AACS-NEB101	

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Report No.: TW2208395-01E Page 9 of 65

Date: 2022-10-09



#### B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

#### C. Peripherals

Device	Manufacturer	Model	Rating
N/A			

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.4 -2014

- A Setup the EUT and simulators as shown on follow
- B Enable AF signal and confirm EUT active to normal condition

5.5 Power line conducted Emission Limit according to Paragraph 15.207

Frequency	Limits (dB µ V)				
(MHz)	Quasi-peak Level	Average Level			
0.15 ~ 0.50	66.0~56.0*	56.0~46.0*			
0.50 ~ 5.00	56.0	46.0			
5.00 ~ 30.00	60.0	50.0			

Notes: 1. \*Decreasing linearly with logarithm of frequency.

2. The tighter limit shall apply at the transition frequencies

#### 5.6 Test Results:

Date: 2022-10-09



## A: Conducted Emission on Live Terminal (150kHz to 30MHz)

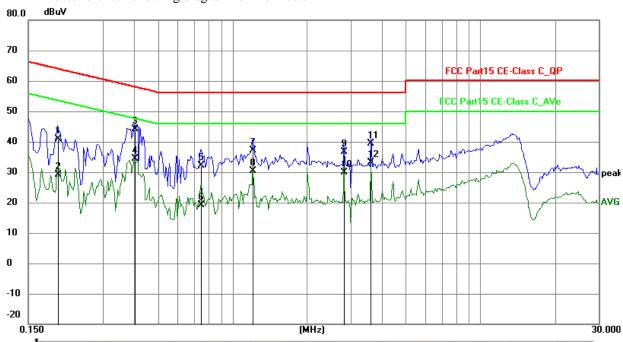
**EUT Operating Environment** 

Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

**EUT set Condition: Communication by BT** 

**Results: Pass** 

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1968	31.14	9.75	40.89	63.74	-22.85	QP	Р
2	0.1968	19.48	9.75	29.23	53.74	-24.51	AVG	Р
3	0.4035	34.33	9.76	44.09	57.78	-13.69	QP	Р
4	0.4035	24.67	9.76	34.43	47.78	-13.35	AVG	Р
5	0.7467	22.40	9.78	32.18	56.00	-23.82	QP	Р
6	0.7467	9.40	9.78	19.18	46.00	-26.82	AVG	Р
7	1.2069	27.23	9.79	37.02	56.00	-18.98	QP	Р
8	1.2069	20.49	9.79	30.28	46.00	-15.72	AVG	Р
9	2.8098	26.69	9.84	36.53	56.00	-19.47	QP	Р
10	2.8098	20.05	9.84	29.89	46.00	-16.11	AVG	Р
11	3.6162	29.62	9.87	39.49	56.00	-16.51	QP	Р
12	3.6162	23.20	9.87	33.07	46.00	-12.93	AVG	Р

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Date: 2022-10-09



## B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

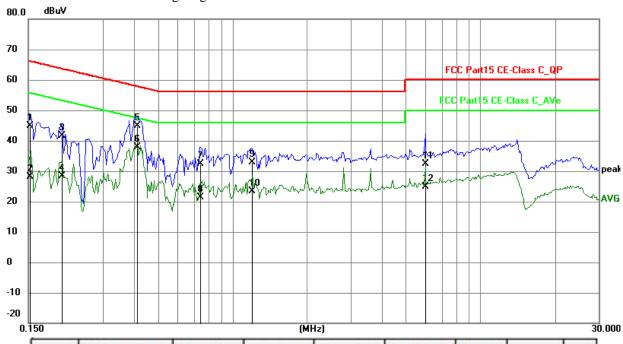
**EUT Operating Environment** 

Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

**EUT set Condition: Communication by BT** 

**Results: Pass** 

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1524	35.21	9.78	44.99	65.87	-20.88	QP	Р
2	0.1524	18.25	9.78	28.03	55.87	-27.84	AVG	Р
3	0.2046	31.98	9.75	41.73	63.42	-21.69	QP	Р
4	0.2046	18.57	9.75	28.32	53.42	-25.10	AVG	Р
5	0.4113	35.01	9.76	44.77	57.62	-12.85	QP	P
6	0.4113	28.11	9.76	37.87	47.62	-9.75	AVG	Р
7	0.7428	22.64	9.78	32.42	56.00	-23.58	QP	Р
8	0.7428	11.72	9.78	21.50	46.00	-24.50	AVG	Р
9	1.1952	23.20	9.79	32.99	56.00	-23.01	QP	Р
10	1.1952	13.69	9.79	23.48	46.00	-22.52	AVG	Р
11	6.0186	22.48	9.97	32.45	60.00	-27.55	QP	Р
12	6.0186	14.91	9.97	24.88	50.00	-25.12	AVG	Р

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Date: 2022-10-09

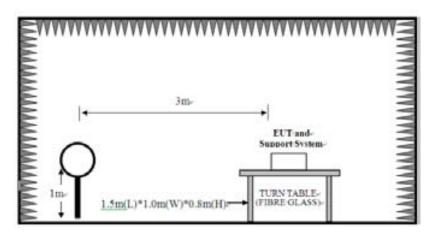


#### **6** Radiated Emission Test

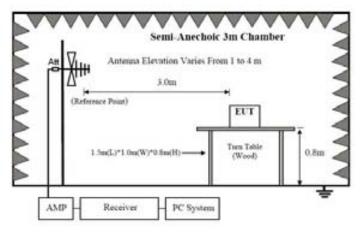
- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.10-2013.
- (3) The frequency spectrum from 30 MHz to 25 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 kHz. All readings are above 1 GHz, peak values with a resolution bandwidth of 1 MHz (Note: for Fundamental frequency radiated emission measurement, RBW=3MHz, VBW=10MHz). Measurements were made at 3 meters.
- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) The antenna polarization: Vertical polarization and Horizontal polarization.

#### **Block diagram of Test setup**

For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30MHz to1GHz



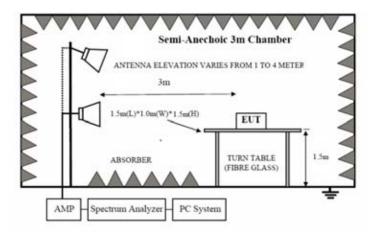
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Date: 2022-10-09



For radiated emissions above 1GHz



- 6.2 Configuration of The EUT

  Same as section 5.3 of this report
- 6.3 EUT Operating Condition
  Same as section 5.4 of this report.
- 6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

## A FCC Part 15 Subpart C Paragraph 15.249(a) Limit

Fundamental Frequency	Field Stre	ength of Fundame	ntal (3m)	Field Strength of Harmonics (3m)		
(MHz)	mV/m	dBuV/m		uV/m	dBuV/m	
2400-2483.5	50	94 (Average)	114 (Peak)	500	54 (Average)	74 (Peak)

Note:

- 1. RF Field Strength  $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 2.Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
- 3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

The report refers only to the sample tested and does not apply to the bulk.

Page 14 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



#### B. Frequencies in restricted band are complied to limit on Paragraph 15.209.

Frequency Range (MHz)	Distance (m)	Field strength (dB $\mu$ V/m)
0.009-0.490	3	20log(2400/F(kHz)) +40log (300/3)
0.490-1.705	3	20log(24000/F(kHz)) +40log (30/3)
1.705-30	3	69.5
30-80	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage  $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
- 4. All scanning using PK detector. And the final emission level was get using QP detector for frequency range from 30-1000MHz.As to 1G-25G, the final emission level got using PK. For fundamental measurement, PK detector used.
- 5. For radiated emissions from 9kHz to 30MHz, the emission level is much less than the limit for more than 20dB. No necessary to take down the record.
- 6. All modulation type were tested and only the worst case was recorded in the test report. GFSK modulation was the worst case.

Date: 2022-10-09

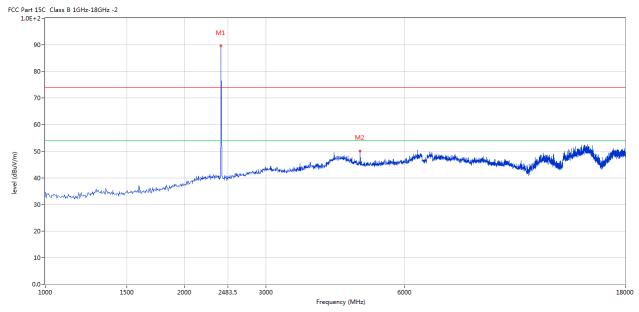


## 6.5 Test result

# A Fundamental & Harmonics Radiated Emission Data

Please refer to the following test plots for details: Low Channel-2402MHz

#### Horizontal



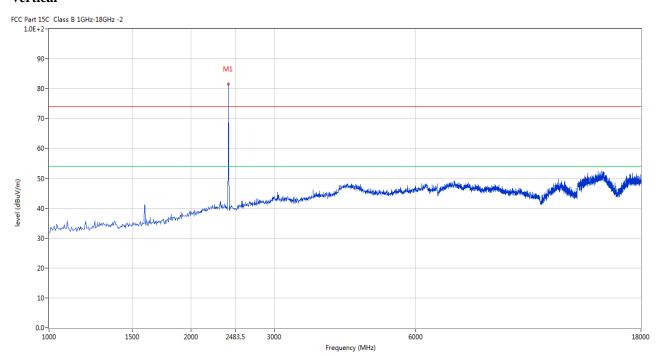
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402	89.81	-3.57	114.0	-24.19	Peak	128.00	100	Horizontal	Pass
2	4802.799	50.13	3.12	74.0	-23.87	Peak	97.00	100	Horizontal	Pass

Report No.: TW2208395-01E Page 16 of 65

Date: 2022-10-09



## Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402	81.93	-3.57	114.0	-32.07	Peak	203.00	100	Vertical	Pass

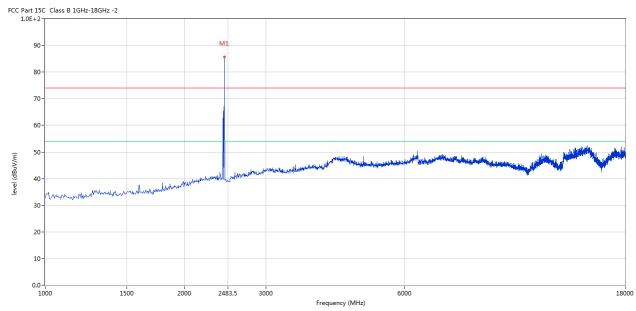
Report No.: TW2208395-01E Page 17 of 65

Date: 2022-10-09



Please refer to the following test plots for details: Middle Channel-2441MHz

#### **Horizontal**



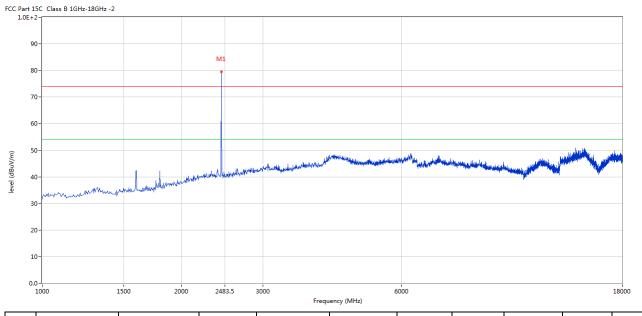
Ī	No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
Ī	1	2441	85.76	-3.57	114.0	-28.24	Peak	172.00	100	Horizontal	Pass

Report No.: TW2208395-01E Page 18 of 65

Date: 2022-10-09



## Vertical



Ī	No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
Ī	1	2441	79.39	-3.57	114.0	-34.61	Peak	199.00	100	Vertical	Pass

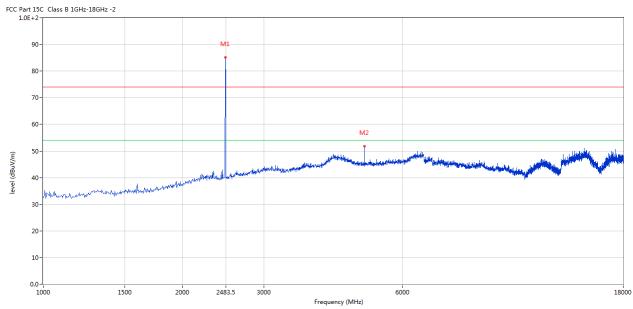
Report No.: TW2208395-01E Page 19 of 65

Date: 2022-10-09



Please refer to the following test plots for details: High Channel-2480MHz

#### Horizontal



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	85.82	-3.57	114.0	-28.18	Peak	132.00	100	Horizontal	Pass
2	4960.010	51.88	3.36	74.0	-22.12	Peak	282.00	100	Horizontal	Pass

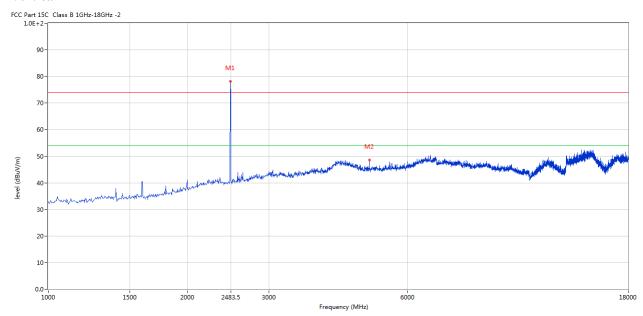
Page 20 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	78.57	-3.57	114.0	-35.43	Peak	299.00	100	Vertical	Pass
2	4960.010	48.63	3.36	74.0	-25.37	Peak	345.00	100	Vertical	Pass

Note: (2) Emission Level = Reading Level + Antenna Factor + Cable Loss-Amplifier

- (3)Margin=Emission-Limits
- (4)According to section 15.35(b), the peak limit is 20dB higher than the average limit
- (5) For test purpose, keep EUT continuous transmitting
- (5) For emission above 18GHz and Below 30MHz, It is only the floor noise. No necessary to take down.
- (6) the measured PK value less than the AV limit.

Report No.: TW2208395-01E Page 21 of 65

Date: 2022-10-09

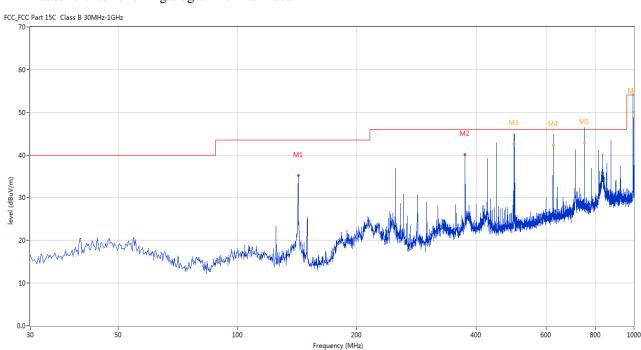


# B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results:** Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
1	142.249	35.14	-17.31	43.5	-8.36	Peak	358.00	100	Horizontal	Pass
2	374.991	40.12	-9.44	46.0	-5.88	Peak	260.00	100	Horizontal	Pass
3*	497.666	42.57	-7.12	46.0	-3.43	QP	328.00	100	Horizontal	Pass
4*	624.946	42.37	-4.85	46.0	-3.63	QP	282.00	100	Horizontal	Pass
5*	750.045	42.90	-3.43	46.0	-3.10	QP	325.00	100	Horizontal	Pass
6*	995.394	50.07	-1.26	54.0	-3.93	QP	225.00	100	Horizontal	Pass

Report No.: TW2208395-01E Page 22 of 65

Date: 2022-10-09

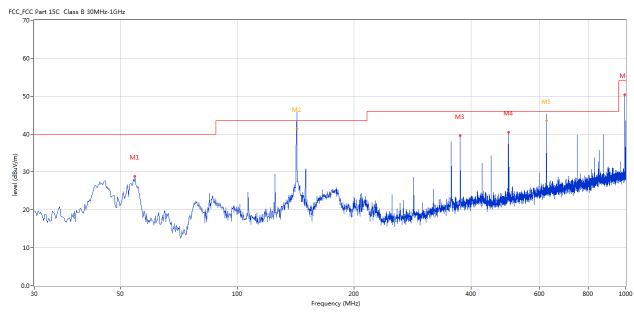


## Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	54.486	28.91	-11.66	40.0	-11.09	Peak	7.00	100	Vertical	Pass
2	142.249	46.68	-17.31	43.5	3.18	Peak	7.00	100	Vertical	N/A
3	374.991	39.57	-9.44	46.0	-6.43	Peak	50.00	100	Vertical	Pass
4	500.090	40.51	-6.91	46.0	-5.49	Peak	50.00	100	Vertical	Pass
5*	624.946	43.51	-4.85	46.0	-2.49	QP	34.00	100	Vertical	Pass
6	995.394	50.36	-1.26	54.0	-3.64	Peak	50.00	100	Vertical	Pass

Date: 2022-10-09

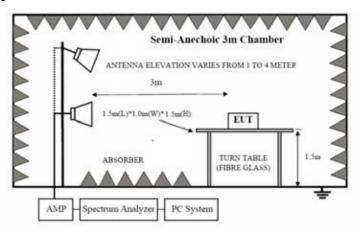


#### 7. Band Edge

#### 7.1 Test Method and test Procedure:

- (1) The EUT was tested according to ANSI C63.10–2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) Set Spectrum as RBW=1MHz, VBW=3MHz and Peak detector used for PK value. RBW=1MHz, VBW=10Hz and Peak detector used for AV value.
- (3) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (4) The antenna polarization: Vertical polarization and Horizontal polarization.

## 7. 2 Radiated Test Setup



For the actual test configuration, please refer to the related items – Photos of Testing

## 7.3 Configuration of The EUT

Same as section 5.3 of this report

## 7.4 EUT Operating Condition

Same as section 5.4 of this report.

## 7.5 Band Edge Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

The report refers only to the sample tested and does not apply to the bulk.

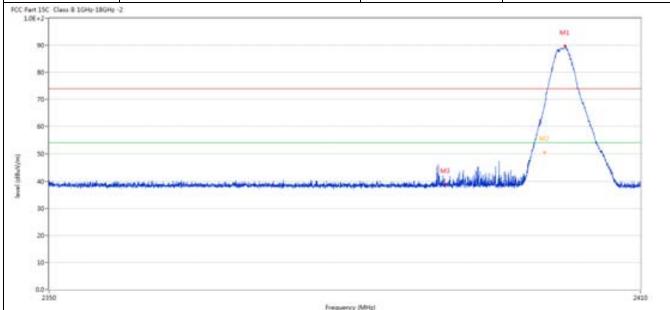
Report No.: TW2208395-01E Page 24 of 65

Date: 2022-10-09



#### 7.6 Test Result

Product:	Commercial Kiosk Tablet	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		

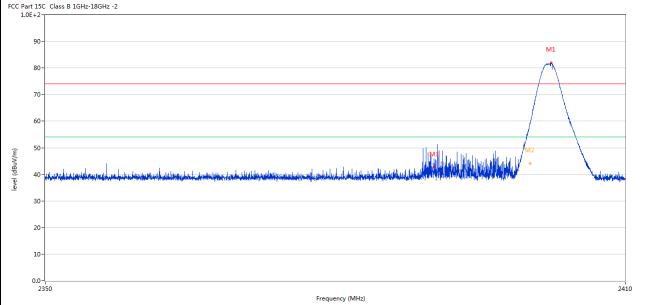


1		1			regard tricks					
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402.247	89.77	-3.57	74.0	15.77	Peak	128.00	100	Horizontal	N/A
2	2400.042	65.94	-3.57	74.0	-8.06	Peak	133.00	100	Horizontal	Pass
2**	2400.042	50.81	-3.57	54.0	-3.19	AV	133.00	100	Horizontal	Pass
3	2390.070	39.02	-3.53	74.0	-34.98	Peak	11.00	100	Horizontal	Pass

Report No.: TW2208395-01E Page 25 of 65



Product:	Commercial Kiosk Tablet	Detector	Vertical				
Mode	Keeping Transmitting	Test Voltage	120V~				
Temperature	24 deg. C,	Humidity	56% RH				
Test Result:	Pass						
FCC Part 15C Class B 1GHz-18GHz -2							

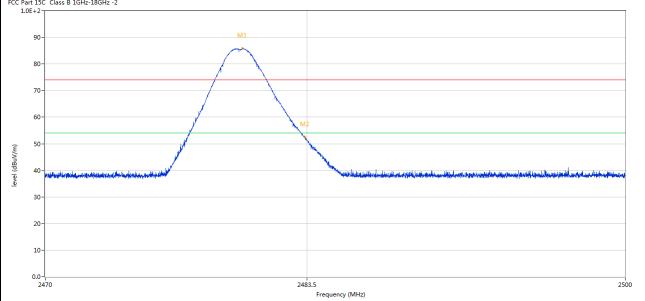


No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402.232	81.94	-3.57	74.0	7.94	Peak	119.00	100	Vertical	N/A
2	2400.072	59.50	-3.57	74.0	-14.50	Peak	199.00	100	Vertical	Pass
2**	2400.072	44.11	-3.57	54.0	-9.89	AV	199.00	100	Vertical	Pass
3	2390.085	42.75	-3.53	74.0	-31.25	Peak	128.00	100	Vertical	Pass

Page 26 of 65 Report No.: TW2208395-01E



Product:	Commercial Kiosk Tablet	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		
FCC Part 15C Class B 1GHz-18GHz -2 1.0E+2-	M1		



No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
1	2480.167	85.80	-3.57	74.0	11.80	Peak	125.00	100	Horizontal	N/A
2	2483.399	52.40	-3.57	74.0	-21.60	Peak	125.00	100	Horizontal	Pass

Report No.: TW2208395-01E Page 27 of 65

Date: 2022-10-09



	Product:		Comme	rcial Kiosk T	ablet		Detecto	or	Vertic	al
	Mode		Keepii	ng Transmitti	ng		Test Volt	age	120V	~
Te	mperature		2	24 deg. C,			Humidi	ity	56% R	RH
Te	est Result:			Pass						
C Part 1	15C Class B 1GHz-18GHz	-2								
9	90-		M1							
8	30-		M1	<b>.</b>						
7	70-									
			1	<b>N</b>						
6	50 -									
			-	M2						
	50-			M2						
		hall the state of		Nr.	Mark sp. Novadoka o halikoda kuna.	idental de la	dahata mentelah dan dikerak	Harlance labertary of the start has		way did
5	50-	hada mada mada sa da sa da mada mada mada		Nr.	ordinas ja Verindras sajalitada eta erre	samalla Mahasa Najaa	high and talker all great	Heissen labertariah disuba		nyaylidaki
5	60- 10-bhddhounedhounddouriddh	hada ayar mayar da ayar qarabay bo'		Nr.	odinicijskosidas žilikaleissas.	idaadka Mahaka Maalika	high and the death and the same	hisanildi.Aridh dinlhi	ille <mark>dd y channedd dd</mark>	
5 4 3	10-14-14-15-14-14-14-14-14-14-14-14-14-14-14-14-14-	Michaelan and Santan and American		Nr.	redirekt sija likusid dan da katan s	iskaalkalkaleelee	أمارا ومعرز إنبال فرمالور من	hisaaldukudh dadh		
5 4 3	10-ladding allowed by the ladding and the ladding allowed by the ladding and t	hade and the second		Nr.	redirektika iki kibada kan di diki ada kan di	ideadh dheal dealach	digle and the death, and	hisaachdeaidh deile	ilay ka a Jaka pandapida	prophetal
. 5. 4 . 4 . 3	10-14-14-15-14-14-14-14-14-14-14-14-14-14-14-14-14-	Mathematical Security of the S		2483.5		samulkalkaluksiska	hlytenski i sill knoblensk	hissocher die Andre		2500
3 3 2 2 1 0.	00-2470			2483.5 Fi	requency (MHz)					2500
4 3 3 2 2 1 0.	50- 10- 10- 10- 10- 10- 10- 10- 10- 10- 1	Results	Factor	2483.5 Fi	requency (MHz)  Over Limit	Detector	Table	Height	ANT	2500
3 3 2 1 1 0.	Frequency (MHz)	Results (dBuV/m)	(dB)	2483.5 Fr Limit (dBuV/m)	over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	2500 Verdid
5 4 3 2	50- 10- 10- 10- 10- 10- 10- 10- 10- 10- 1	Results		2483.5 Fi	requency (MHz)  Over Limit		Table	Height		

Note: 1. The PK emission level less than the AV limit. No necessary to record the AV emission level.

2. All modulation type were tested and only the worst case was recorded in the test report. GFSK modulation was the worst case.

Report No.: TW2208395-01E Page 28 of 65

Date: 2022-10-09



## 8.0 Antenna Requirement

## **Applicable Standard**

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

This product has an FPC antenna. The antenna gain is 2.11dBi Max. It fulfills the requirement of this section. Test Result: Pass

Page 29 of 65

Report No.: TW2208395-01E



FSK Modulation							Keep transmitting			
Product:		nercial Kio			Test Mod	le:	Keep tr	ansmit	ting	
Mode	Kee	ping Trans	mitting		Test Volta	nge	12	20V~		
Temperature		24 deg. C	2,		Humidit	y	56% RH			
Test Result:		Pass			Detecto	r	PK			
OdB Bandwidth										
Ref Lvl 10 dBm	Marker 1 [T1 ndB] ndB 20.00 dB BW 919.83967936 kHz			RBW VBW SWT	30 k 100 k 8.5 m	Hz	F Att	20	dB dBm	
10										1
					<b>V</b> 1	[T1]	2.4018	3.12 6473	dBm GHz	Z
0			, m	\M	ndB BW	9	2 19.8396	0.00 7936	dB kHz	1
-10				, /	$\nabla_{\mathrm{T}}$	[T1]	-2	3.10	dBm	i l
		, A	$\sim$	4	<b>∨</b> <sub>T2</sub>	2 [T1]	2.4015	7014	GHz dBm	i
-20 1MAX					T2		2.4024	8998	GHz	11
-30	~					7				1
-50							M.			1
my						V	7	many	<b>Ч</b> а.	Ī
-60									-0	Ì
-70										Ì
-80								Ì		
-90	02 GHz		300					an 3		

Page 30 of 65

Report No.: TW2208395-01E



GFSK Modula	tion									
Product:		Commerc	cial Kiosk	Tablet	-	Test Mode:		Keep tra	nsmitting	
Mode		Keepin	g Transmi	tting	Т	est Voltage		12	0V~	
Temperature		24	4 deg. C,			Humidity		56%	6 RH	
Test Result:			Pass			Detector		F	PK	
20dB Bandwidth		91	19.84kHz							
Ŕ		Marker	1 [T1 r	ndB]	RBW	30 kH	Iz Rl	F Att	20 dB	
Ref Lvl		ndB		.00 dB	VBW	100 kH				
10 dBm		BW 919	.839679	936 kHz	SWT	8.5 ms	S U1	nit	dBm	1
						<b>v</b> <sub>1</sub>	[T1]	- 4	.06 dBm	A
								2.44087	074 GHz	
0				1	_	ndB		20	.00 dB	
					<b>W</b>	BW ▽ <sub>T1</sub>	91 [T1]	9.83967	936 kHz	
-10					\		<u> </u>	2.44057		
			4	$\mathcal{M}$	·	V VT2	[T1]	-23	.74 dBm	
-20			TA			T2		2.44148	998 GHz	1MA
-30			لر							IMA
		ارم	J				Υ <sub>4</sub>			
-40	m	~~~					7	M		
-50	v~						<i>\</i> ^\	\\ \	man	
-60										
-70										
-80										
-90 Center 2	.441 G	Hz		300	kHz/			Spa	n 3 MHz	
Date: 24	1.SEP.2	022 15	:35:02							

Page 31 of 65

Report No.: TW2208395-01E



Product:	Comme	rcial Kiosk	Tablet	T	est Mode:		Keep tra	nsmitting	
Mode	Keepi	ng Transmi	tting	To	est Voltage		120	)V~	
Temperature	,	24 deg. C,		]	Humidity		56%	RH	
Test Result:		Pass			Detector		P	K	
dB Bandwidth	Ģ	913.83kHz					-	-	
	Marker	1 [T1 r	ndB]	RBW	30 kH	z RF	Att	20 dB	
Ref Lvl	ndB	20.	00 dB	VBW	100 kH				
10 dBm	BW 91	3.827655	31 kHz	SWT	8.5 ms	Uni	Lt	dBm	ı
10					<b>v</b> <sub>1</sub>	[T1]	-5	.08 dBm	A
						2	.47987	074 GHz	
0			1		ndB		20	.00 dB	
			M	7/4	BW ▼⊤1	913 [T1]	.82765	531 kHz .65 dBm	
-10				<u> </u>			-25 .47957	.05 dbm 615 GHz	
			$\sim$	1	<b>∨</b> <sub>T2</sub>	[T1]	-24	.83 dBm	
-20		TA	/		T2	2	.48048	998 GHz	
1MAX		~ ~			WY				1MA
-30					<u> </u>				
40	~				\	1			
-40	mann						M		
-50 mm mm	N					V	M	~~\a.	
-60								M	
-70									
-80									
-90									
Center 2.4	8 GHz		300	kHz/			Spa	n 3 MHz	

Report No.: TW2208395-01E Page 32 of 65



π /4DQPSK Mod	dulation								
Product:	Commo	ercial Kios	sk Tablet		Test Mo	de:	Keep tra	ansmitting	
Mode	Keep	ing Transı	mitting		Test Volt	age	12	20V~	
Temperature		24 deg. C	·,		Humidi	ty	569	% RH	
Test Result:		Pass			Detecto	or	PK		
20dB Bandwidth		1.281MH	Z						
	Marker			RBW	30 k		F Att	20 dB	
Ref Lvl	ndB		00 dB	VBW	100 k				
10 dBm	BW 1	.280561	.12 MHz	SWT	8.5 m	ıs U:	nit	dBm	1
					<b>v</b> <sub>1</sub>	[T1]	-:	3.10 dBm	A
0			-					7074 GHz	
			X	Λ.	ndF BW	8	1.28056		
-10		0	$\langle \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	$\bigvee$ $\bigvee$	$\nabla_{\mathbf{T}}$	L [T1]	-23	3.12 MHz $3.13$ dBm	
-10			3	V	$\sim$		2.40138	3978 GHz	
		$\sim$			$\nabla_{\mathrm{T}}$	[T1]	-23	3.00 dBm	
-20 1MAX	7					V 2	2.40265	7034 GHz	1MA
-30									
-40	N					\/M	L nk		
-50							W		
-60									
-70									
-80									
-90 Center 2.40	02 GHz		300	kHz/			Spa	an 3 MHz	
		:33:43							

Page 33 of 65

Report No.: TW2208395-01E



Product:		Commer	cial Kiosk	Tablet		T	est Mode:		Keep tra	ansmitting	
Mode		Keepii	ng Transmi	tting		To	est Voltage	:	12	0V~	
Temperature		2	24 deg. C,			]	Humidity		56%	% RH	
Test Result:			Pass				Detector		]	PK	
dB Bandwidth	•	1	.281MHz								
r)		Marker	1 [T1 n	ndB]	R	BW	30 k	Hz RI	F Att	20 dB	
Ref Lvl		ndB		00 dB	V	BW	100 k				
10 dBm		BW	1.280561	12 MHz	S	WT	8.5 m	s Uı	nit	dBr	n <del>-</del>
10							<b>v</b> <sub>1</sub>	[T1]	- 4	4.05 dBm	A
0									2.44087	074 GHz	
				1			ndB	3	20	0.00 dB	
-10				/\/\	~\^\	1	BW ▼TI	[T1]	1.28056	112 MHz 4.05 dBn	í
-10			M	$\sim$		V	N/V		2.44038	978 GHz	5
			/				$\nabla_{\mathrm{T}}$	[T1]	-24	1.00 dBm	n
-20 1MAX		Ţ	d d					T2	2.44167	7034 GHz	1 <b>m</b>
-30											
-40	$\sim$							\ <u>\</u>	الربيم		
-50	,~~\d								* W	humay	
-60											
-70											
-80											
-90 Center 2	.441 GI	łz		300	kHz/				Spa	an 3 MHz	

Page 34 of 65

Report No.: TW2208395-01E



Product:	Comme	ercial Kiosk	Tablet	[	Test Mode:		Keep tra	ansmitting	
Mode	Keep	ing Transmi	tting	Г	Test Voltage		12	0V~	
Temperature		24 deg. C,			Humidity		569	% RH	
Test Result:		Pass			Detector		]	PK	
0dB Bandwidth		1.275MHz							
	Marke	r 1 [T1 r	ndB]	RBW	30 k	Hz RI	7 Att	20 dB	
Ref Lvl	ndB		00 dB	VBW				1-	
10 dBm	BW	1.274549	OLU MHZ	SWT	8.5 m	s Ur	nit	dBm	1
					<b>v</b> <sub>1</sub>	[T1]	-5 2.47987	.08 dBm	A
0					ndB		2.4/98/	074 GHz	
			,	~ Λ.	BW		1.27454		
-10		_ /	$\longrightarrow \longrightarrow$	1,0/	V <sub>T</sub> 1	[T1]	-24	1.95 dBm	
				V	$\bigvee_{\mathbf{T}} \mathbf{T}_{\mathbf{T}}$	[T1]	2.47939 -2!	579 GHz	
-20 1MAX		T /				Ψ <sub>2</sub>	2.48067	7034 GHz	1M
-30									
-40						Ju/\	. ль		
-50 -60 M	<b></b>							many	
-60									
-70									
-80									
-90 Center 2.4	48 GHz		300	kHz/			Spa	an 3 MHz	

Page 35 of 65 Report No.: TW2208395-01E



8DPSK Modul	ation									
Product:		Comm	ercial Kio	sk Tablet		Test Mo	de:	Keep tra	ansmitting	
Mode		Keep	ing Trans	mitting		Test Volt	age	12	0V~	
Temperature			24 deg. C	Ξ,		Humidi	ty	569	% RH	
Test Result:			Pass			Detecto	or	PK		
20dB Bandwidth			1.238MH	Z						
Ŕ		Marker	1 [T1 n	idB]	RBW	30 k	Hz R	F Att	20 dB	
Ref Lvl		ndB		00 dB	VBW	100 k				
10 dBm		BW 1	.238476	95 MHz	SWT	8.5 m	ıs U:	nit	dBn	n -
10						<b>v</b> <sub>1</sub>	[T1]	-1	2.59 dBm	A
				1				2.40185	074 GHz	
0				Ž	Λ	ndF	8	20	0.00 dB	
				. /\/	1 Con	BW ✓ ▼ <sub>T</sub>	[T1]	1.23845	7695 MHz	
-10			~^~	11/4/4	7	\\\\\		2.40142		
						$\nabla \frac{1}{\sqrt{2}}$	(T1)	-23	2.54 dBm	1),
-20			7				A.	2.40266	433 GHz	1MA
		/								11124
-30										
-40	$\bigwedge$	m					/w			-
-50	W							4	Man M	
-60										
-70										-
-80										-
-90 Center 2.	402 GI	Ηz		300	kHz/	<u> </u>		Spa	an 3 MHz	
Date: 24.	.SEP.2	022 15	:31:10							

Page 36 of 65

Report No.: TW2208395-01E



Product:		Commerc	cial Kiosk	Tablet		Т	est Mode:		Keep tra	nsmitting	
Mode		Keepin	g Transmi	tting		Te	est Voltage	:	12	0V~	
Temperature		2	4 deg. C,			]	Humidity		56%	6 RH	
Test Result:			Pass				Detector	PK			
0dB Bandwidth		1.	.244MHz								
Ŕ		Marker	1 [T1 n	ıdB]	I	RBW	30 k	Hz RI	7 Att	20 dB	
Ref Lvl		ndB		00 dB		/BW	100 k				
10 dBm		BW 1	L.244488	98 MHz	Š	SWT	8.5 m	s Ur	nit	dBm	n =
10							<b>v</b> <sub>1</sub>	[T1]	-3	.37 dBm	A
0									2.44087	074 GHz	
					<b>^</b>		ndE	3	20 1.24448	.00 dB	
-10				\\\	\\ \	\	BW ▼ <sub>TJ</sub>	[T1]	-23	898 MHz	
-10			~^	$\sim$			\\\\		2.44041	984 GHz	
2.0			1					[T1]	-23	.25 dBm	
-20 1MAX			<i>)</i>					7	2.44166	433 GHz	1M2
-30											
-50	$\bigwedge$	mend									
-60	$\bigvee$								Jan.	5 July 1	
-70											
-80											
-90 Center 2	.441 GI	Hz		300	kHz/	,			Spa	n 3 MHz	ļ

Page 37 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



8DPSK Modulat	ion											
Product: Commercial Kiosk				k Tablet			est Mode:		Keep transmitting			
Mode Keeping Transmi				tting	Test Voltage				120V~			
Temperature 24 deg. C							Humidity		56% RH			
Test Result:	Pass						Detector		PK			
20dB Bandwidth		1.238MHz							<b></b>			
Ŕ		Marker	1 [T1 r	ndB]	F	RBW	30 k	Hz Rl	F Att	20 dE	3	
Ref Lvl		ndB	20.	00 dB	7	/BW	100 k					
10 dBm		BW 1	L.238476	95 MHz	S	SWT	8.5 m	s Uı	nit	dI	3m	
10							lacksquare1	[T1]	- 4	.48 dE	a A	
									2.47987	074 GH		
0				1			ndE	}	20	.00 dB		
				$\bigwedge$	Λ ,	_	BW ▽ <sub>T1</sub> 1		1.23847	695 MH		
-10			Λ.	~ lo	_\_/^	4		[T1]	$\frac{-24}{2.47942}$	.46 dF 585 GH		
			~~~			V	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	r [T1]	-24			
-20			rl				\ <u>\</u>	<b>†</b> 2	2.48066		_	
1MAX			N. C.					Y			1MA	
-30												
-50	$\bigwedge$	Z Z						M				
-60	1								\u00e4	mad	4	
-70												
-80												
-90 Center 2.	.48 GHz	z		300	kHz/	,			Spa	ın 3 MH	z	
Date: 24	.SEP.2	022 15	:32:22									

Report No.: TW2208395-01E Page 38 of 65

Date: 2022-10-09



### 10.0 FCC ID Label

### FCC ID: 2AACS-NEB101

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

# **Mark Location:**



Page 39 of 65

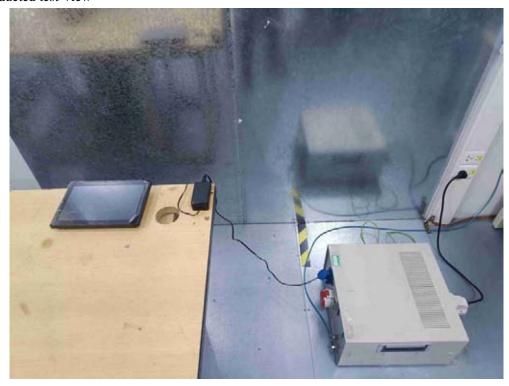
Report No.: TW2208395-01E

Date: 2022-10-09



### 11.0 Photo of testing

#### 11.1 Conducted test View--



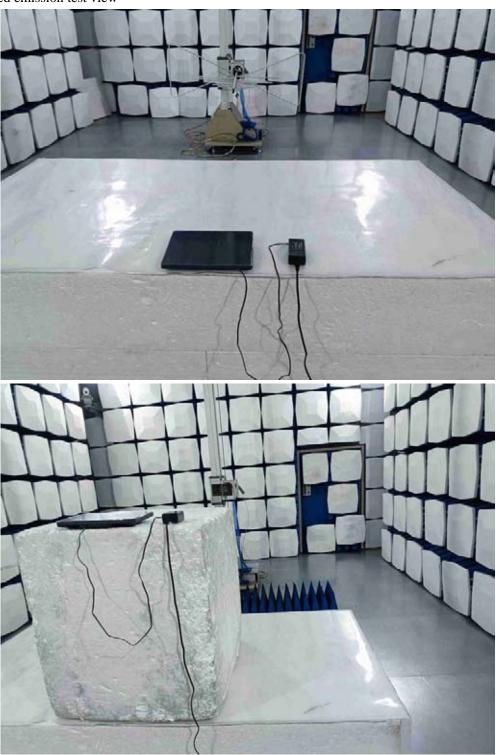
Page 40 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



# Radiated emission test view



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Report No.: TW2208395-01E

Date: 2022-10-09



#### 11.2 Photographs – EUT

### Outside View



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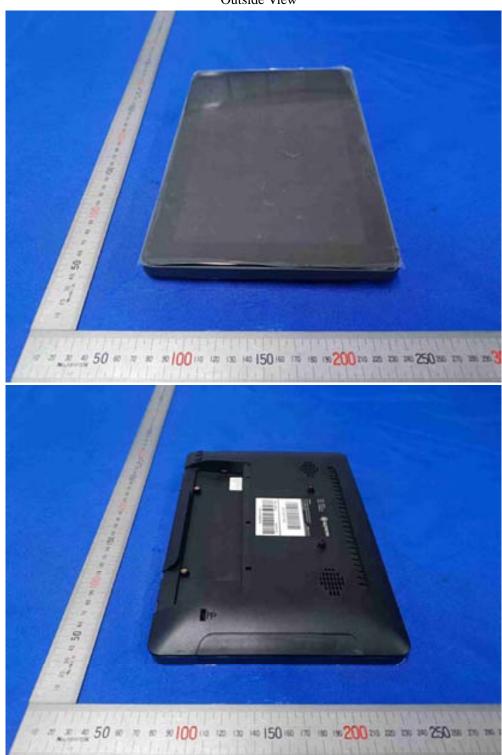
Page 42 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



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Page 43 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



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Page 44 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



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Page 45 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



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Page 46 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



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Page 47 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



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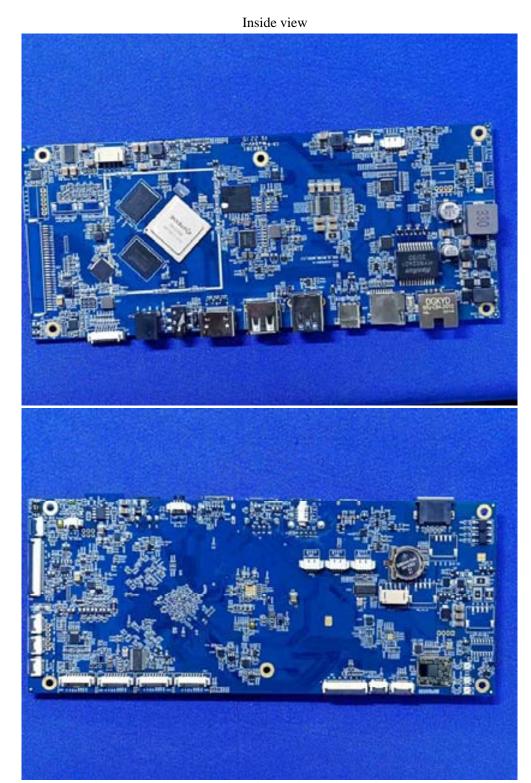
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Page 48 of 65

Report No.: TW2208395-01E

Date: 2022-10-09





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Page 49 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



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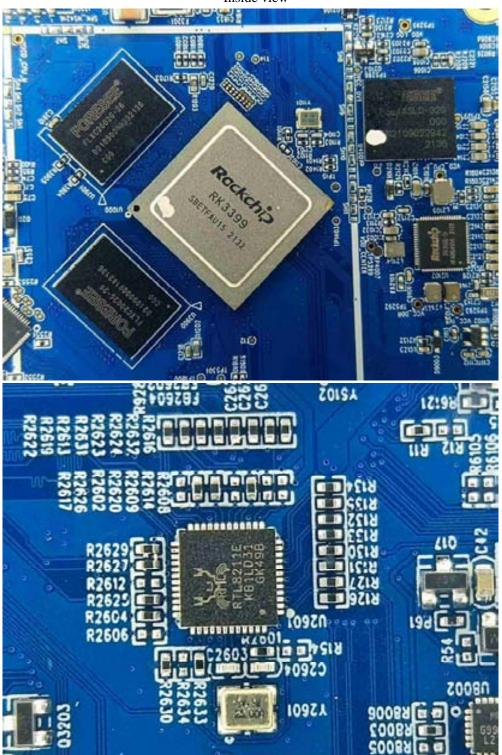
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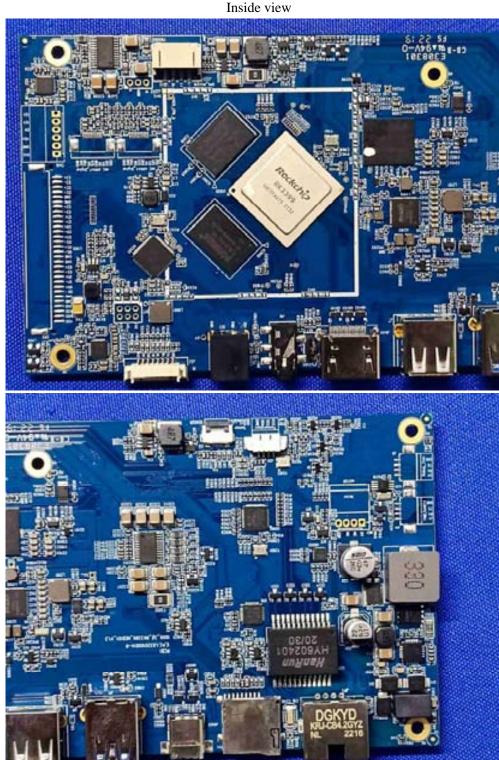
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Page 51 of 65

Report No.: TW2208395-01E

Date: 2022-10-09





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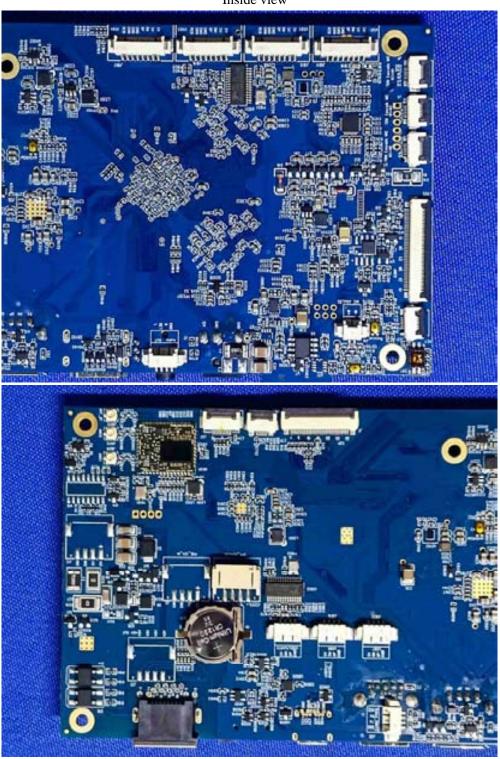
Page 52 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



Inside view



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Page 53 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



Inside view



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Page 54 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



Inside view



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Page 55 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



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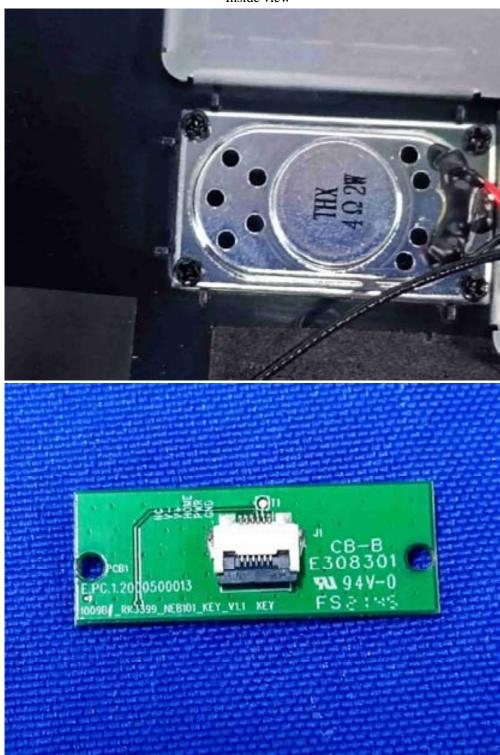
Page 56 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



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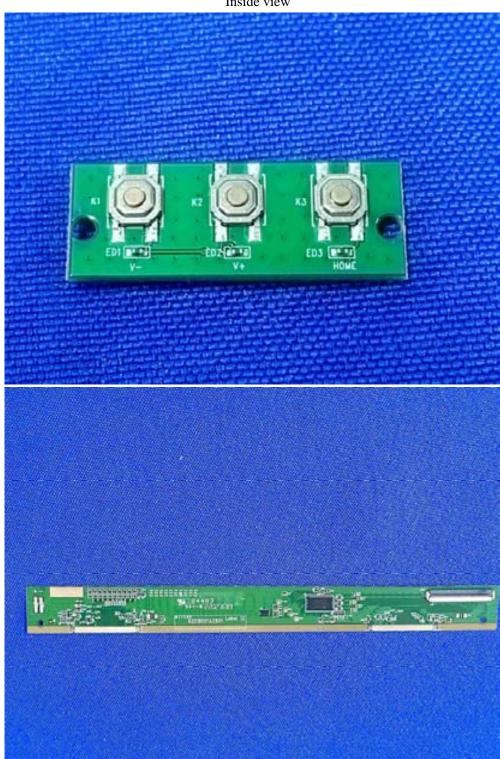
Page 57 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



Inside view



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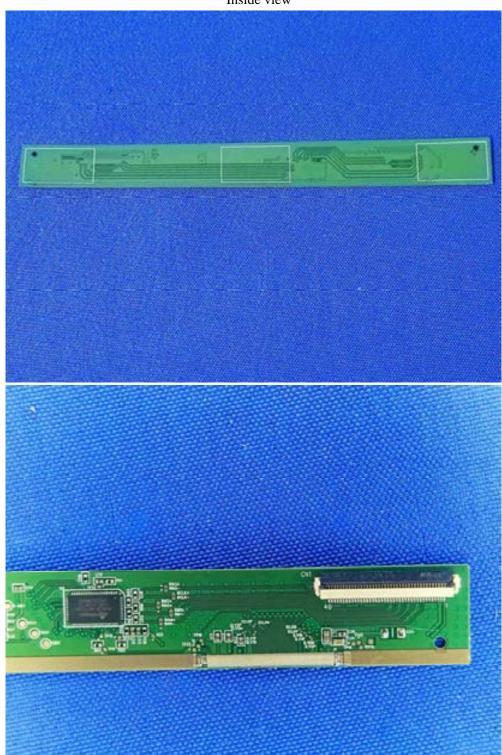
Page 58 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



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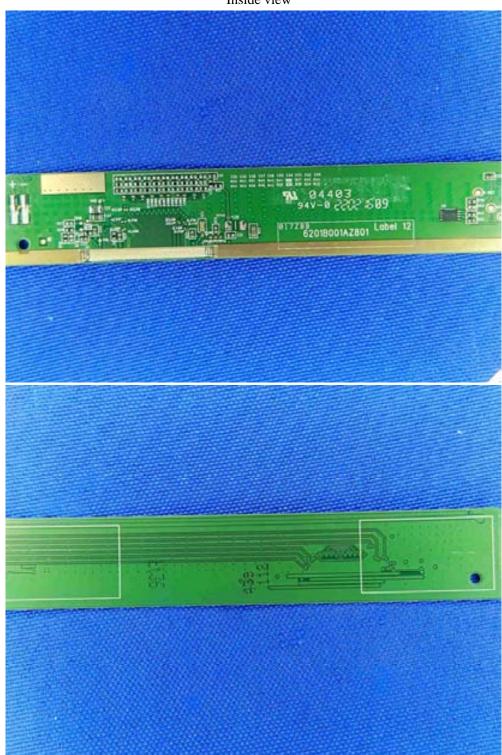
Page 59 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



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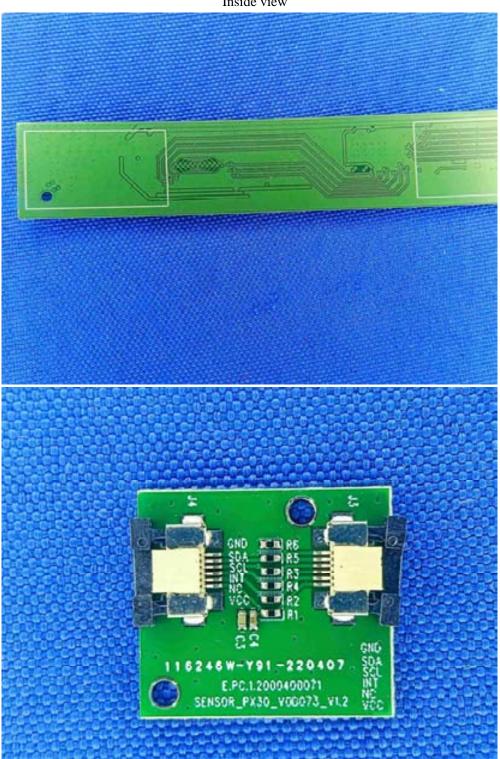
Page 60 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



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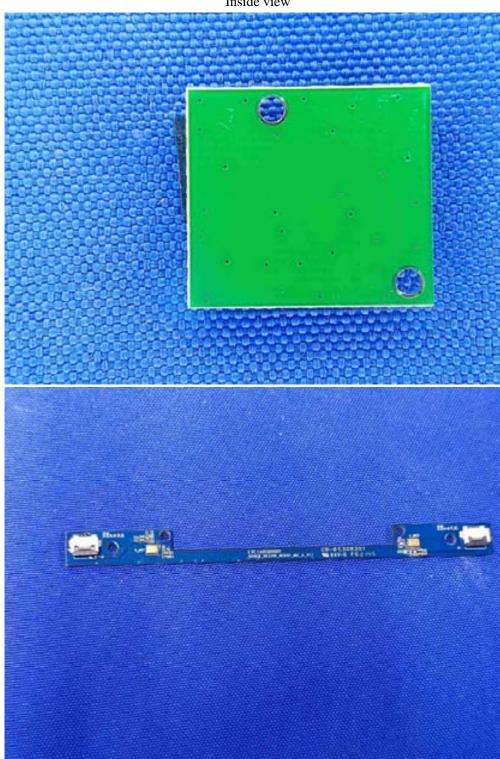
Page 61 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



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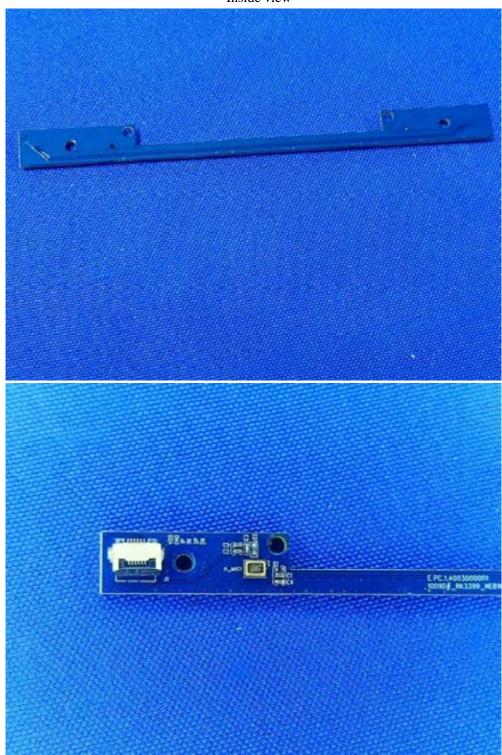
Page 62 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



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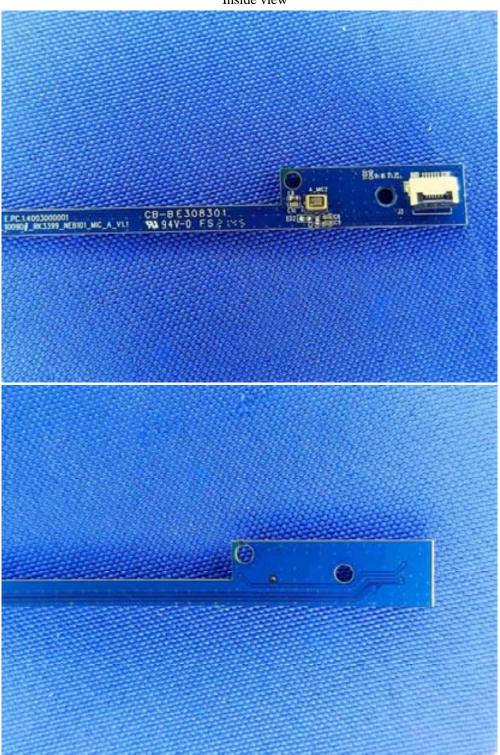
Page 63 of 65

Report No.: TW2208395-01E

Date: 2022-10-09



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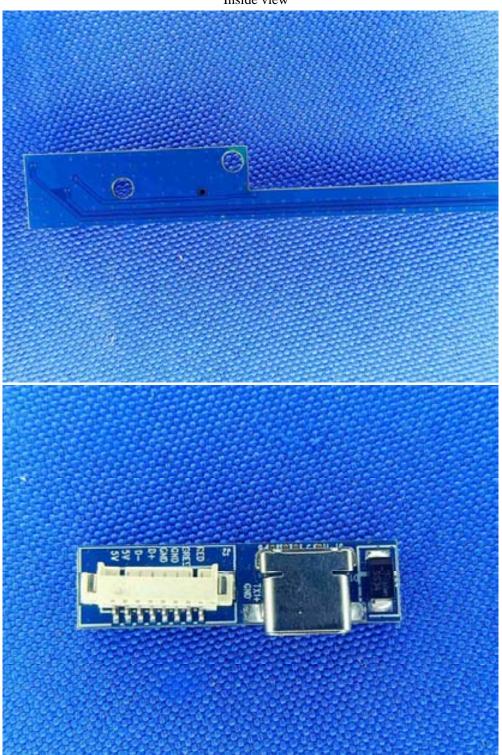
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Inside view



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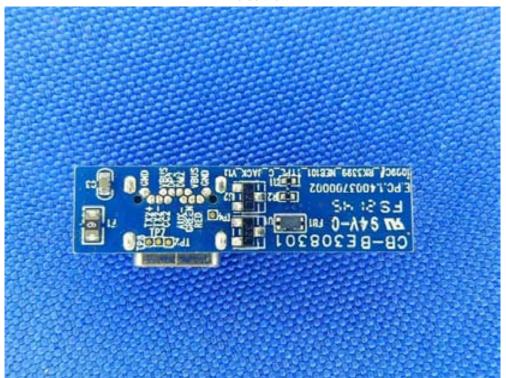
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Report No.: TW2208395-01E Page 65 of 65

Date: 2022-10-09



Inside view



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