上海冠显光电科技有限公司
Shanghai Top Display Optoelectronics Co., LTD

☐ Pre-specification

☑ Final-specification

MODEL	:	TY080WXM02RF
ISSUED DATE	:	2025-4-22
VERSION	:	1.0

● Version record

Issued Date	Description	Version	Editor	Audit
2025-4-22	Final Revision	1.0	Pearl	

Content

1. Hardware Introduction 1
1.1. Connector Pin Definitions 1
2. Product Specifications 2
3. Reliability Test 4
3.1. ESD Test 4
3.2. Electrical Fast Transient Group Pulse Test（EFT） 5
3.3. Radiation test 6
4. Product Size 8
5. Model Definition 9
6. Packaging and Physical Dimensions 10
7. Sale and Service 11
8. Disclaimer 12

1. Hardware Introduction

1.1. Connector Pin Definitions

Pin Name	Type	Reset state	Internal Configurable Pull-up and Pull-down Resistors	Default drive capability (mA)	Voltage	Function
GND_IN	POWER	0V	-	-	0V	POWER-GND
GND_IN	POWER	0V	-	-	0V	POWER-GND
485-	-	-	-	-	-	485-/485_B
RXD	-	-	-	-	5V	UART3-RX (to user's TX)
TXD	-	-	-	-	5V	UART3-TX (to user's RX)
485+	-	-	-	-	-	485+/485_A
POWER_IN	POWER	-	-	-	-	POWER-INPUT, DC 5.2-36V
POWER_IN	POWER	-	-	-	-	POWER-INPUT, DC 5.2-36V

2. Product Specifications

● Product parameter	
Model	TY080WXM02RF
Product serial	Medical series
Core processor	TR660
Size	8.0 inch
Resolution	800RGB×1280
Active area(mm)	107.64(W)×172.22(H)
Product size(mm)	206.0(W)×120.6(H)×16.4(T)
Color	24-bit 8R8G8B
Storage	Customer available 60M Bytes
Pictures format	JPG/PNG
Video playback	H.264 format video
Audio playback	Support
Download pictures	TYPE-C
Firmware update	TYPE-C
● LCD	
Display type	TFT LCD IPS
Back light	LED
Brightness(cd/m²)	300
Backlight life(hour)	30000
Contrast	1500
Perspective	(80/80/80/80)
● Touch panel	
Touch mode	Resistive touch screen
● Environmental electrical parameters	
Voltage	5.2~36V，Typical value 24V

Power consumption	24V/114mA(maximum) 24V/47mA(backlight off)
Working temperature	-20℃～70℃
Storage temperature	-30℃～80℃
Working humidity	10%~90%RH
Storage humidity	10%~90%RH
● Communication interface parameters	
Communication mode	485/232/5V TTL, default is 485 or 232.
Baud	2400~115200,typical value is 115200
Data frame format	8N1
Communication plug-in specification	HY2.0-8P
● Other hardware specifications	
TF card	Used to update the firmware or the user interface
Buzzer	Support
TYPE-C	Support
RTC	Support
Speaker	Support 4Ω2W speakers

3. Reliability Test

3.1. ESD Test

3.1.1. Implementation Standards

Implementation standards	GB/T 17626.2
Performance criteria	B

3.1.2. Test Environment

Test ambient temperature: 25℃

Test environment humidity: 50%

Test process: place the product on the test bench, conduct contact and air discharge in turn around the iron frame of the serial port screen and the display area, and observe whether there is any abnormal reset and restart display.



3.1.3. Test Data Results:

Discharge type	Discharge value	Test Results	Performance criteria
Contact	±6KV	Pass	B
Discharge	±8KV	Pass	B

3.2. Electrical Fast Transient Group Pulse Test （EFT）

3.2.1. Implementation Standards

Implementation standards	GB/T 17626.4

3.2.2. Test Environment

Test ambient temperature: 25℃

Test environment humidity: 50%

Test process: Place the product flat on the test bench, 10cm high, and supply power to the smart screen through the power supply after coupling the pulse group by the pulse group generator. Observe the screen during the experiment to see if there are phenomena such as reset and restart, abnormal display, touch abnormality, and so on.



3.2.3. Test Data Results:

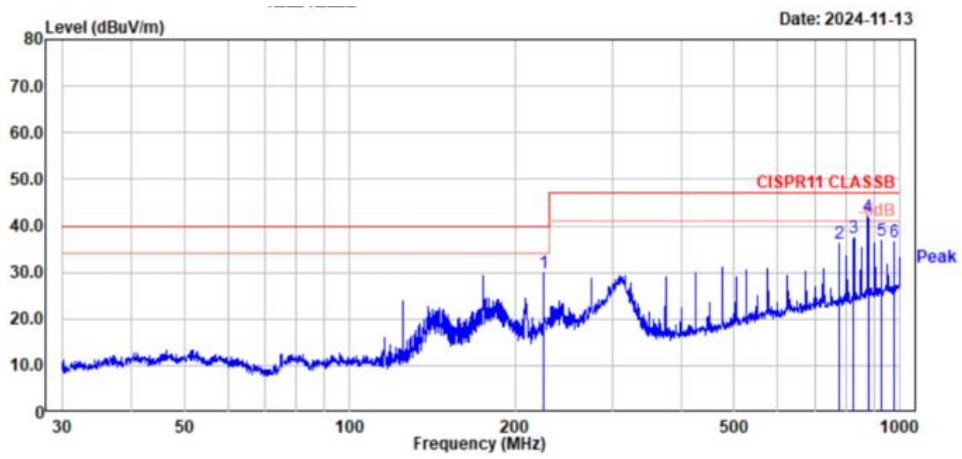
Implementation standards	GB/T 17626.4
Performance criteria	B
Test environment	4.0KV ; 100KHZ ; 60S

3.3. Radiation test

3.3.1. Implementation Standard

Implementation standards	CISPR
Performance criteria	B

3.3.2. Radiation test horizontal direction test data diagram

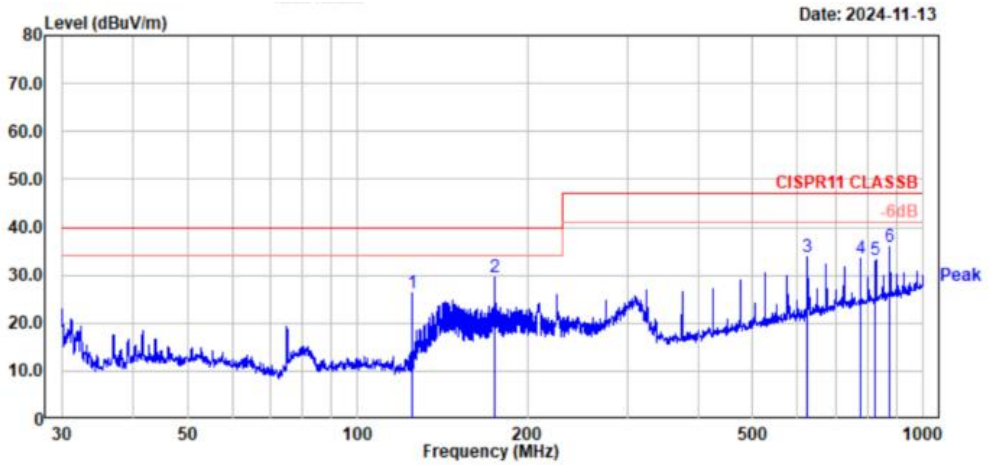



```
Site          : RE #1
Condition     : CISPR11 CLASSB 3m VULB9162-2023 Horizontal
              : DET:Peak
Applicant     : 冠显
EUT           : 8*V03RTP
M/N           :
S/N           :
Power Supply  : DC5V
Ambient       : 25'C/54%RH
Test Mode     :
Test Engineer: AC
Memo          :
```

	Freq	Level	Read Level	Limit Line	Over Limit	Ant Factor	Cable Loss	Remark	APos	TPos
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB		cm	deg
1	225.191	29.86	16.11	40.00	-10.14	11.75	2.00	Peak	100	156
2	774.555	36.36	12.31	47.00	-10.64	20.67	3.38	Peak	300	90
3	824.915	37.54	12.86	47.00	-9.46	21.20	3.48	Peak	300	112
4	875.480	42.11	16.71	47.00	-4.89	21.81	3.59	Peak	300	90
5	925.899	36.98	10.98	47.00	-10.02	22.31	3.69	Peak	200	253
6	975.801	36.40	9.89	47.00	-10.60	22.71	3.80	Peak	100	122

Figure3.3.3-1 radio test horizontal direction test data diagram

3.3.3. Vertical direction test data chart of radiation test

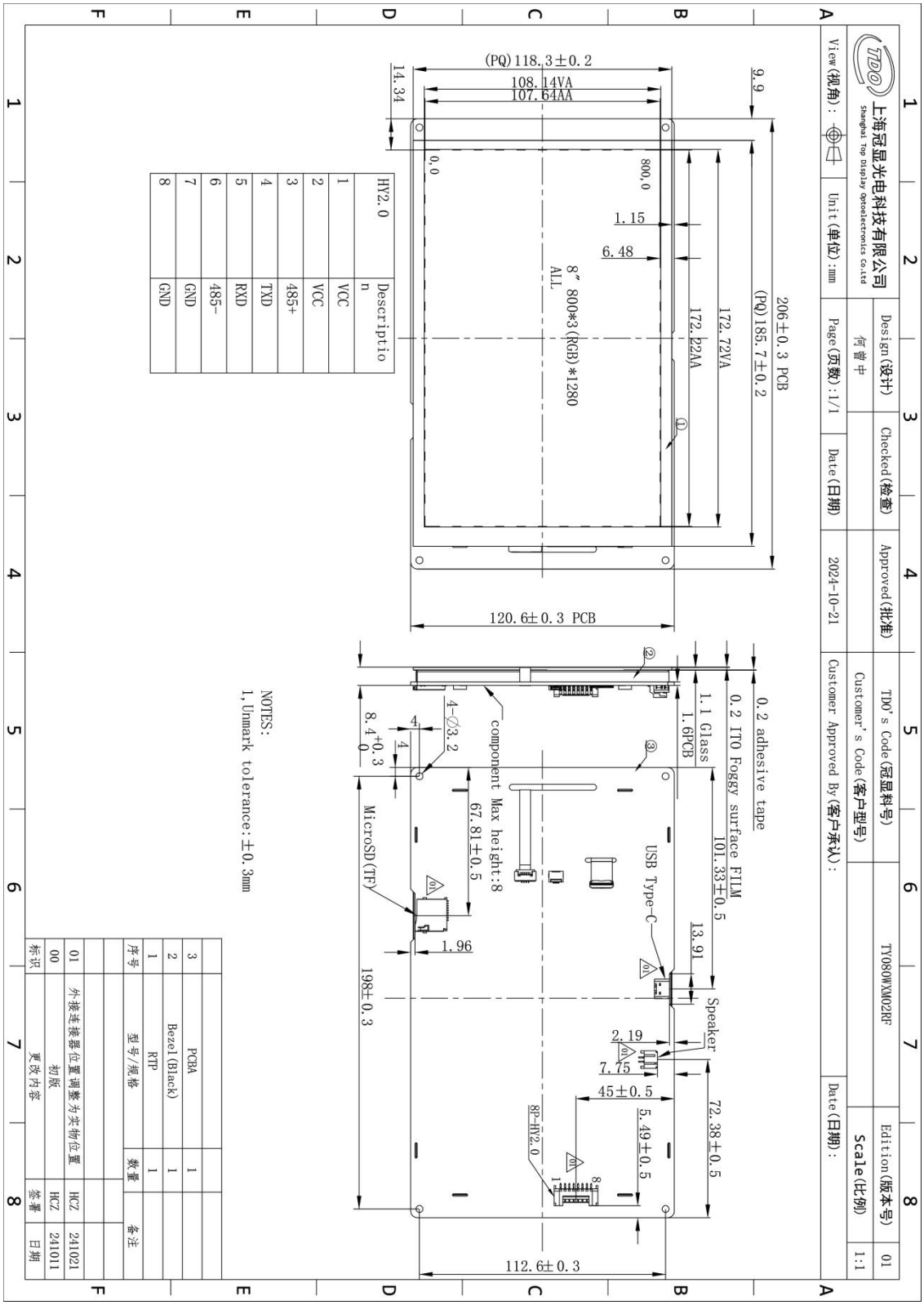



```
Site          : RE #1
Condition     : CISPR11 CLASSB 3m VULB9162-2023 Vertical
              : DET:Peak
Applicant     : 冠显
EUT           : 8*V03RTP
M/N           :
S/N           :
Power Supply  : DC5V
Ambient       : 25'C/54%RH
Test Mode     :
Test Engineer: AC
Memo          :
```

	Freq	Level	Read Level	Limit Line	Over Limit	Ant Factor	Cable Loss	Remark	APos	TPos
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB		cm	deg
1	125.137	26.16	14.83	40.00	-13.84	9.63	1.70	Peak	100	47
2	175.189	29.44	17.83	40.00	-10.56	9.76	1.85	Peak	251	1
3	625.225	33.69	11.15	47.00	-13.31	19.48	3.06	Peak	100	0
4	774.258	33.40	8.68	47.00	-13.60	21.34	3.38	Peak	100	56
5	824.676	33.18	7.83	47.00	-13.82	21.87	3.48	Peak	200	176
6	875.305	35.94	9.92	47.00	-11.06	22.43	3.59	Peak	100	239

Figure 3.3.3-2 radio test Vertical direction test data diagram

4. Product Size



5. Model Definition

T	Y	080	WX	M	02	R	F
1	2	3	4	5	6	7	8

① : 1 position--TDO abbreviation, fixed。

② : 1 position--U(U series serial port)/P(parallel port)/Y(Y series serial port)/H(HDMI interface type)/S(adapter board)/L

③ : 3 position--size,eg.080->8.0 inch

④ : 2 position--resolution abbreviation

⑤ : 1 position--C (Consumer Grade) / H (Commercial Grade) / T (Industrial Grade) / M (Medical Grade) / L (MINI Board) / P (With Case)

⑥ : 2 position---serial number

⑦ : 1 position---C (with capacitive touch panel)/R (with resistive touch panel)/N (without touch panel)

⑧ : 1 position-----Platform: F-TR660 / G-TR540 / H-TR230M /J -TR240 / K-TR661 / D-TR670 / 0-Android / 1-Linux

6. Packaging and Physical Dimensions

Single product weight					
Net weight (G)	TBD				
Packaging standard and total weight					
Packing box model	Packing box size (length*width*height, unit: mm)	Layers	Quantity (PCS)/layer	Total quantity (pieces)	Total weight (KG)

7. Sale and Service



TEL:021-6429098

FAX:021-6429089

EMAIL:sales@shtdo.com

WEB:www.shtdo.com

ADDR:Shanghai, Minhang district, Xinjunhuan Road 88, Building13A, 4th floor

Online shop:http://shtdo.en.alibaba.com/

8. Disclaimer

This document provides product information about Shanghai Top Display Optoelectronics Technology Co., Ltd. (hereinafter referred to as Shanghai Top Display), which aims to assist customers to speed up product development progress, short development cycles, any routine programs provided in the service process or other channels , technical documents, data manuals, product drawings and other materials and information are for reference only, and customers have the right not to use or to modify and use for their own reference. The company does not provide any guarantee of completeness and reliability. If the customer causes special, incidental or indirect losses for any reason during the use process, please assume all responsibility by themself.