SMART DISPLAY MODULE SPECIFICATION

1.3 Inch Smart Knob Display with Wi-Fi /BLE	
Model:	UEDX24240013-MD50E
Version:	V3.0
Date:	2024-07-30

Customer Confirmation 客户确认

Approved by	Notes

REVISION HISTORY

Revision	Date	Contents of Revision Change	Remark
V1.0	20221223	Preliminary release	
V2.0	20240218	Change to English version	
V3.0	20240730	Add schemata, GitHub project links, and environment configuration links	

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1. Introduction

1.1 Features

Brief Info:

1) Outline Dimension: ϕ50 Round
2) Interaction Method: Rotate and Press
3) Shell Color: Black/White/Silver/Customized
4) Power: DC 5V, 100mA

System

1) OS: RTOS
2) CPU: ESP32-C3 160Mhz
3) RAM: 400KB
4) Flash: 4MB
5) Interface: UART/USB
6) Support 2.4GHz Wi-Fi、BLE 5、BLE Mesh

Display

1) Size: 1.3 Inch
2) Resolution: 240*240
3) Mode: IPS
4) Brightness: 300 cd/m^2
5) Touch: without

Other

1) Operation Temperature：-20~70℃
2) Storage Temperature：-30~80℃

1.2 Appearance picture

2. Product information

2.1 Interface Description

Pin NO.	Symbol	Description	Voltage Range	Remarks
1	VCC	Power 5V	5V	
2	ADC	GPIO3, ADC IO	0-3.3V	
3	GND	Grounds	0V	
4	NC	NC	-	
5	NC	NC	-	
6	RX	UART Receive	0-3.3V	
7	TX	UART Transmit	0-3.3V	
8	RST	Reset signal, do not connect if not in use	0-3.3V	
9	D+	USB D+	3.3V	
10	D-	USB D-	3.3V	

The connector specifications is 10PIN 0.5mm pitch

2.2 Display Information

Item	Parameter	Description
Color	65K colors	R5G6B5 16bits
AA	32.40(W)*32.40(H)	1.3 inch
Resolution	240*240	Round
Backlight	LED	30000Hour Min
Brightness	300 cd/m^2	

2.3 Voltage & Current

Item	Conditions	Min	Typ	Max	Unit
Power Voltage	DC	4. 0	5.0	5.5	V
Operation Current	VCC= +5V, Maximum backlight current	50	100	150	mA
	VCC= +5V,backlight off	-	50	-	mA
Recommended power supply:5V 1A DC					

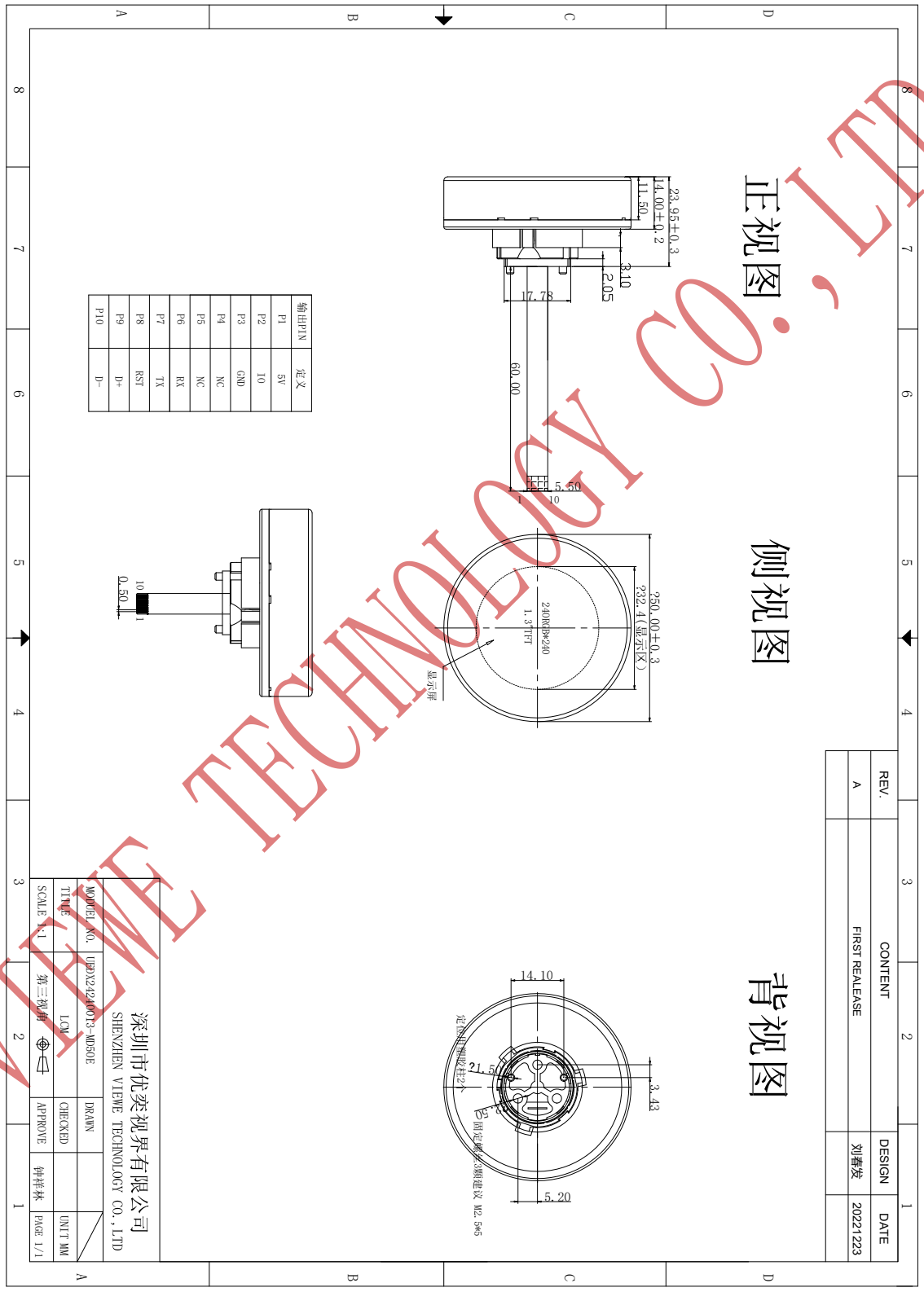
2.4 Reliability Test

Item	Conditions	Min	Typ	Max	Unit
Working Temperature	60%RH at 5V voltage	-20	25	70	C
Storage Temperature	---	-30	25	85	C
Working Humidity	25°C	10%	60%	90%	RH
ESD	---	Contact: ±4KV Air: ±8KV			KV

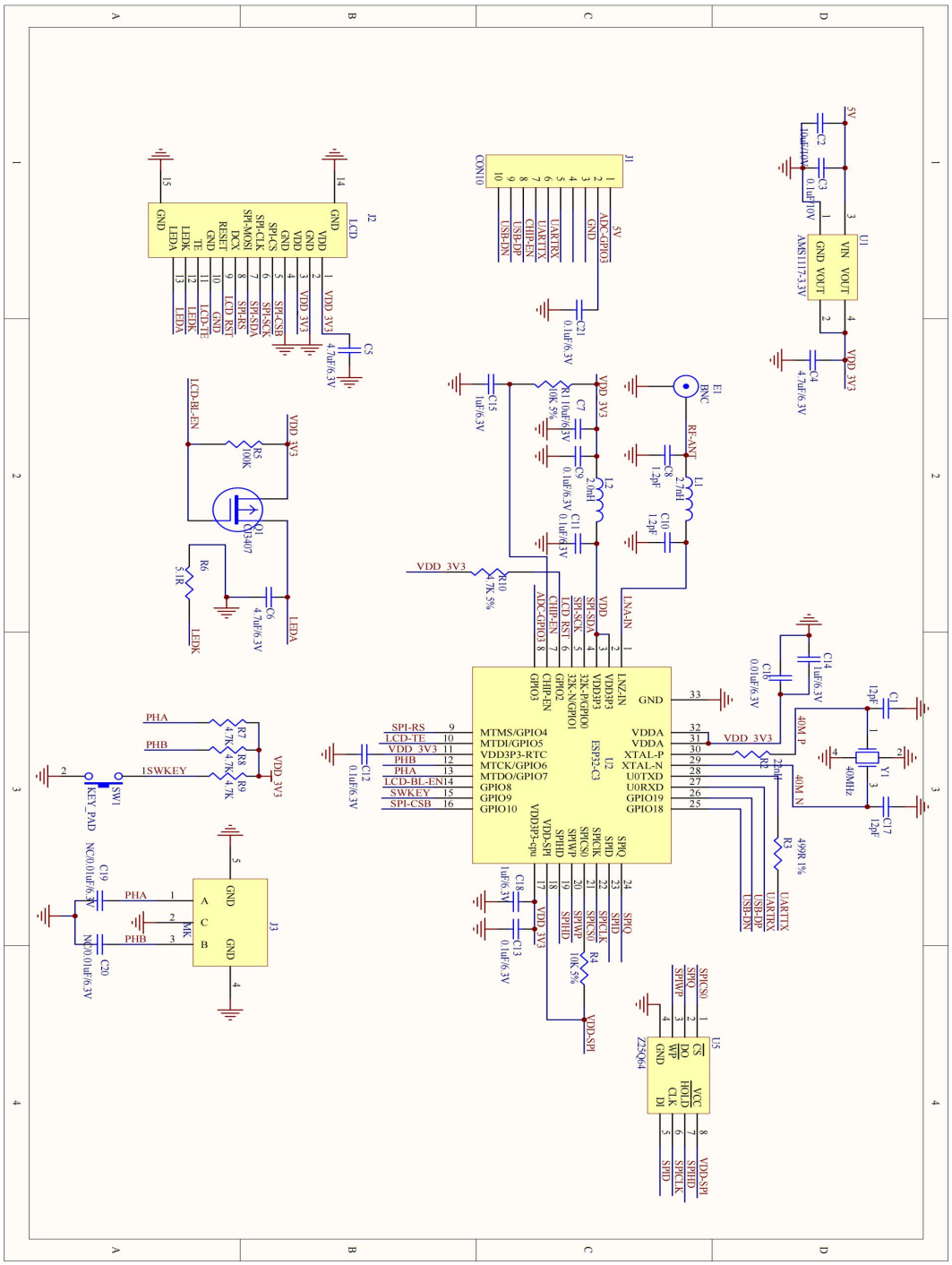
2.5 Related software

Software name	Version	Software associated configuration	Development environment configuration link
Arduino IDE	2.0.17 (esp32)	1. Board: ESP32C3 Dev Module 2. CPU Frequency: 160MHz (WiFi) 3. Flash Frequency: 80MHz 4. Flash Mode: QIO 80MHz 5. Flash Size: 4MB (32Mb) 6. Partition Scheme: Default 4MB with spiffs (1.2MB APP/1.5MB SPIFFS) 7. PSRAM:NO 8. Programmer: Esptool	ESP32-Arduino config (github.com)
ESP-IDF	5.1.1 5.2.2	Once configured, no configuration is required （If you have any problem with the configuration, please contact us, we will help you）	ESP-IDF config (github.com)

3. MECHANICAL DRAWING



4. Schematic



5. Related downloads

5.1 Arduino relevant information

ESP32-Arduino/examples/UEDX24240013-MD50E-Arduino-SDK at main • VIEWESMART/ESP32-Arduino (github.com)

5.2 IDF relevant information

ESP32-IDF/examples/UEDX24240013-MD50E-SDK-en at main • VIEWESMART/ESP32-IDF (github.com)