

# T-Echo\_V1.0 Power Consumption Test Log

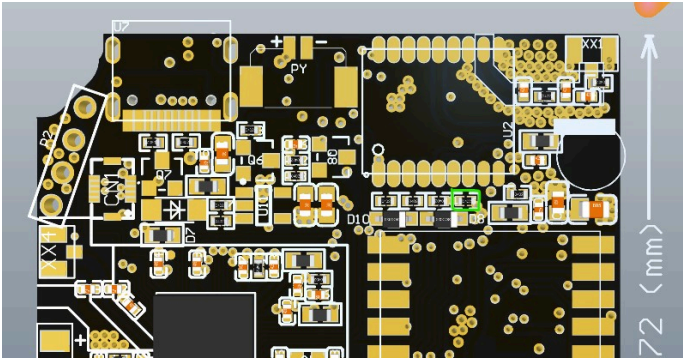
Date: 20240909  
Test board: T-Echo\_V1.0 (20210628)  
Software name: Sleep\_Display.ino  
Testing organization: LILYGO Laboratory

## 1. Test Environment Description

Test Tools	Sampling speed	Test Methodology	Input voltage	Test environment temperature
BLU939	100000 times/s	Battery Interface Measurement	+4.2V	25°C/77°F

## 2. Modification Instructions

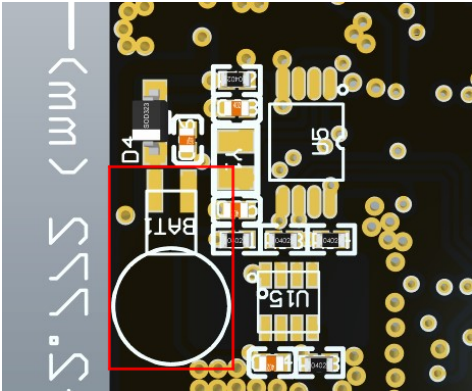
- 2.1 拆除板子上的位号为“LED6”的LED灯  
2.1 Remove the LED light with the identifier "LED6" from the board.



- 2.2 拆除板子上的位号为“R34”的电阻  
2.2 Remove the resistor with the identifier "R34" from the board.

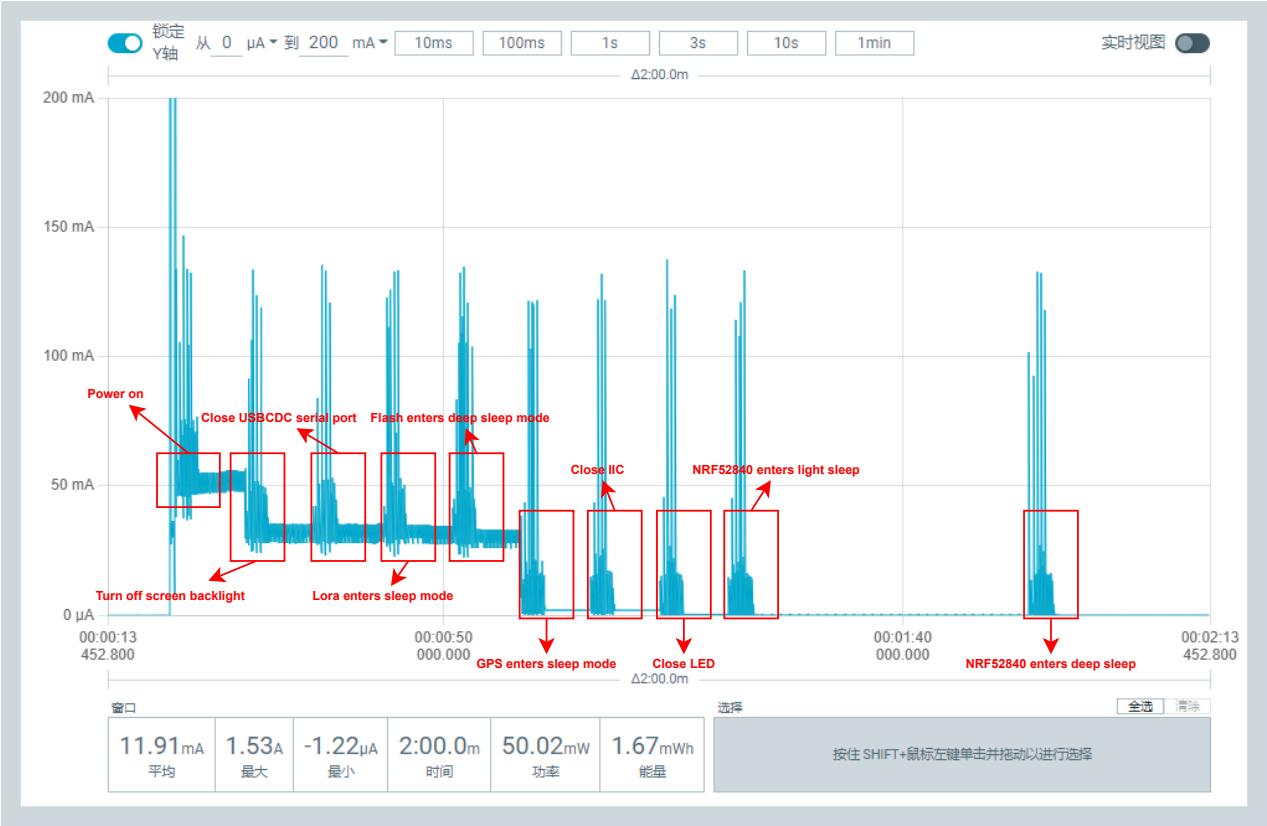


- 2.3 拆除位号为“BAT1”位置的RTC电池  
2.3 Remove the RTC battery located at the position marked "BAT1".



### 3. Power consumption testing

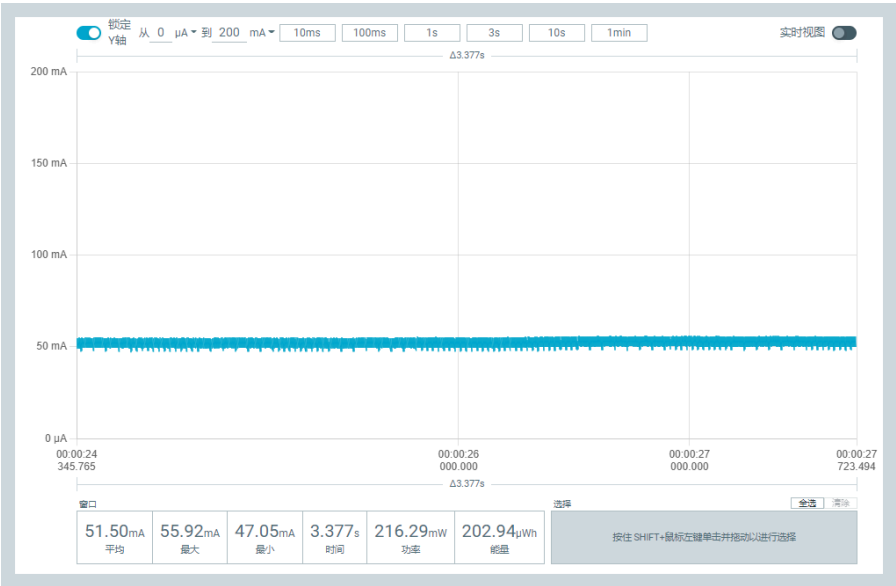
3.1 总电流变化测试图如下  
3.1 The test chart depicting the variation of total current is as follows.



3.2 Current Test Status Diagram:

nRF52840	VDD3.3_EN	LED1~3	Screen backlight	GPS	Ink screen	SX1262	Flash	USB CDC Serial	IIC
System ON	ON	ON	ON	ON	Sleep	ON	ON	ON	ON

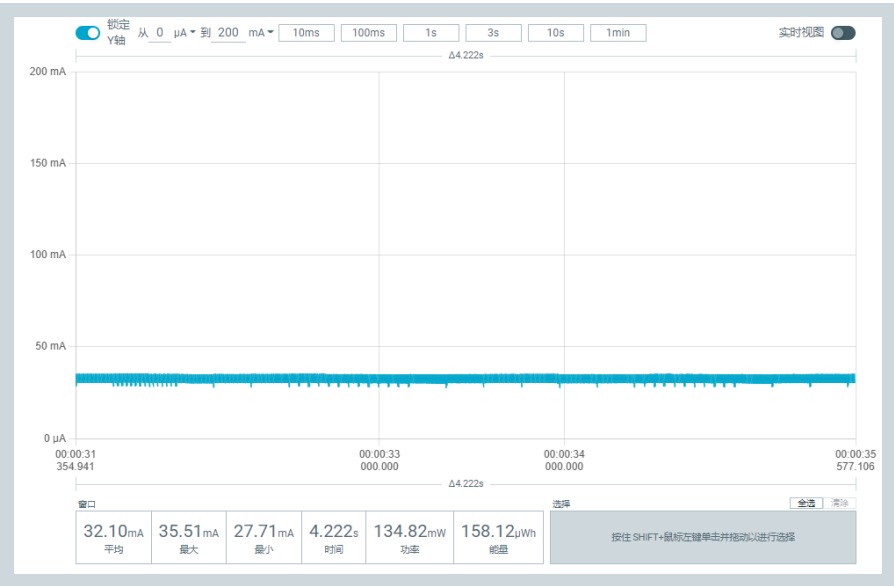
Test result: average 51.50 mA



3.3 Current Test Status Diagram:

nRF52840	VDD3.3_EN	LED1~3	Screen backlight	GPS	Ink screen	SX1262	Flash	USB CDC Serial	IIC
System ON	ON	ON	OFF	ON	Sleep	ON	ON	ON	ON

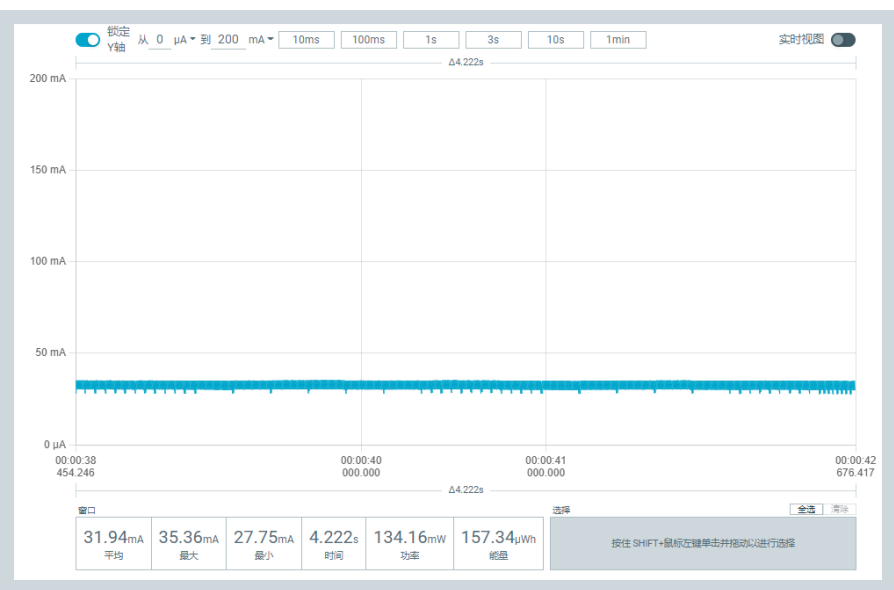
Test result: average 32.10 mA



3.4 Current Test Status Diagram:

nRF52840	VDD3.3_EN	LED1~3	Screen backlight	GPS	Ink screen	SX1262	Flash	USB CDC Serial	IIC
System ON	ON	ON	OFF	ON	Sleep	ON	ON	OFF	ON

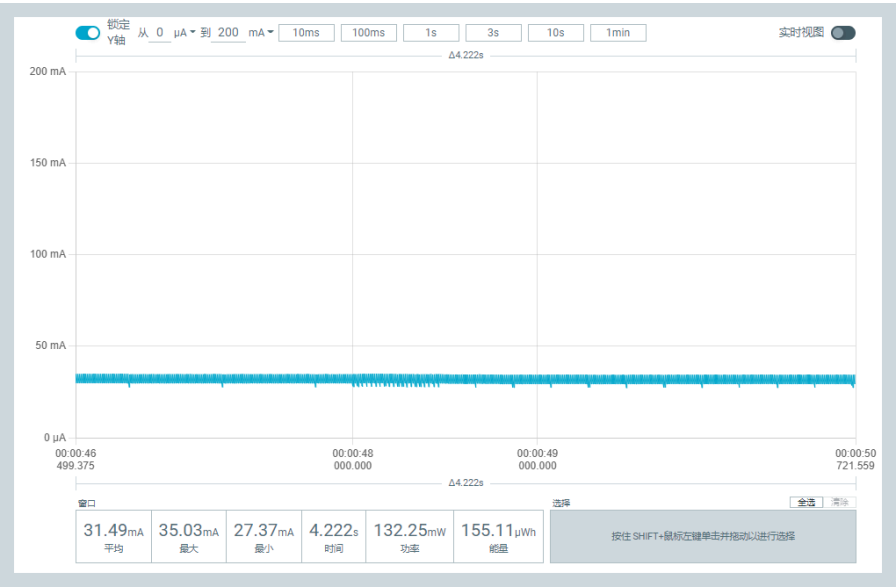
Test result: average 31.94 mA



3.5 Current Test Status Diagram:

nRF52840	VDD3.3_EN	LED1~3	Screen backlight	GPS	Ink screen	SX1262	Flash	USB CDC Serial	IIC
System ON	ON	ON	OFF	ON	Sleep	Sleep	ON	OFF	ON

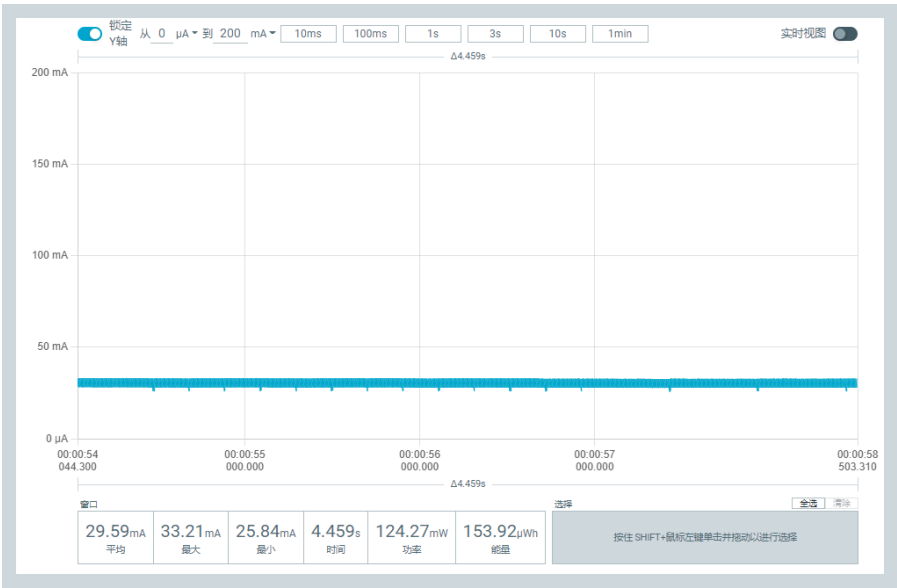
Test result: average 31.49 mA



3.6 Current Test Status Diagram:

nRF52840	VDD3.3_EN	LED1~3	Screen backlight	GPS	Ink screen	SX1262	Flash	USB CDC Serial	IIC
System ON	ON	ON	OFF	ON	Sleep	Sleep	Deep sleep	OFF	ON

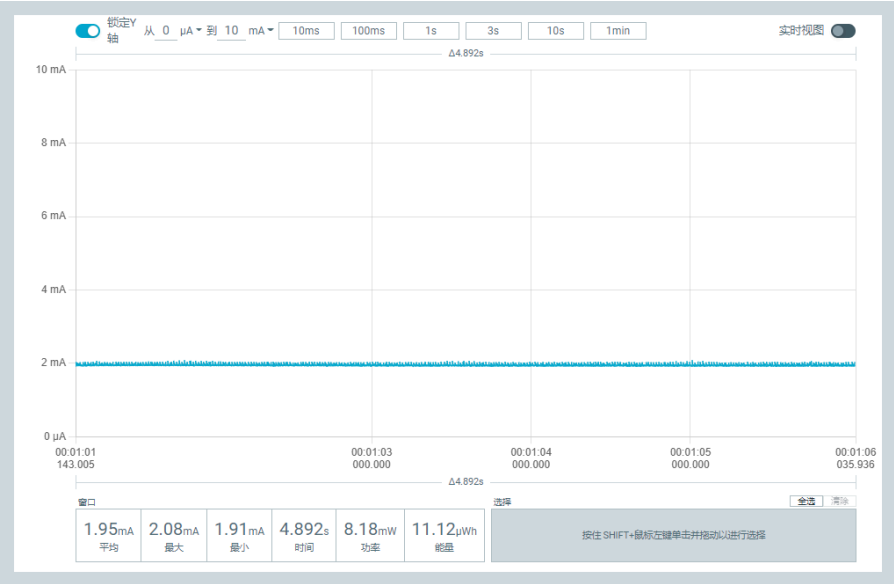
Test result: average 29.59 mA



3.7 Current Test Status Diagram:

nRF52840	VDD3.3_EN	LED1~3	Screen backlight	GPS	Ink screen	SX1262	Flash	USB CDC Serial	IIC
System ON	ON	ON	OFF	Standby	Sleep	Sleep	Deep sleep	OFF	ON

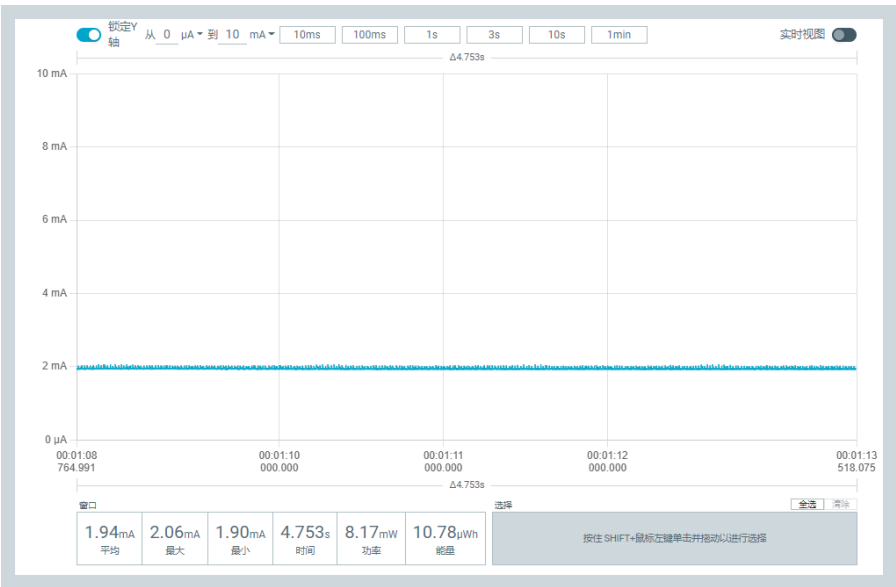
Test result: average 1.95 mA



3.8 Current Test Status Diagram:

nRF52840	VDD3.3_EN	LED1~3	Screen backlight	GPS	Ink screen	SX1262	Flash	USB CDC Serial	IIC
System ON	ON	ON	OFF	Standby	Sleep	Sleep	Deep sleep	OFF	OFF

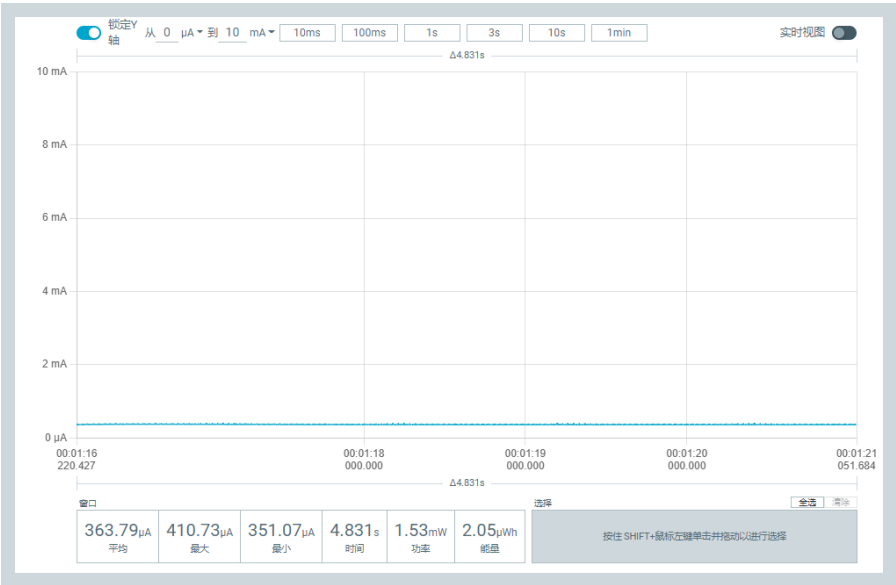
Test result: average 1.94 mA



3.9 Current Test Status Diagram:

nRF52840	VDD3.3_EN	LED1~3	Screen backlight	GPS	Ink screen	SX1262	Flash	USB CDC Serial	IIC
System ON	ON	OFF	OFF	Standby	Sleep	Sleep	Deep sleep	OFF	OFF

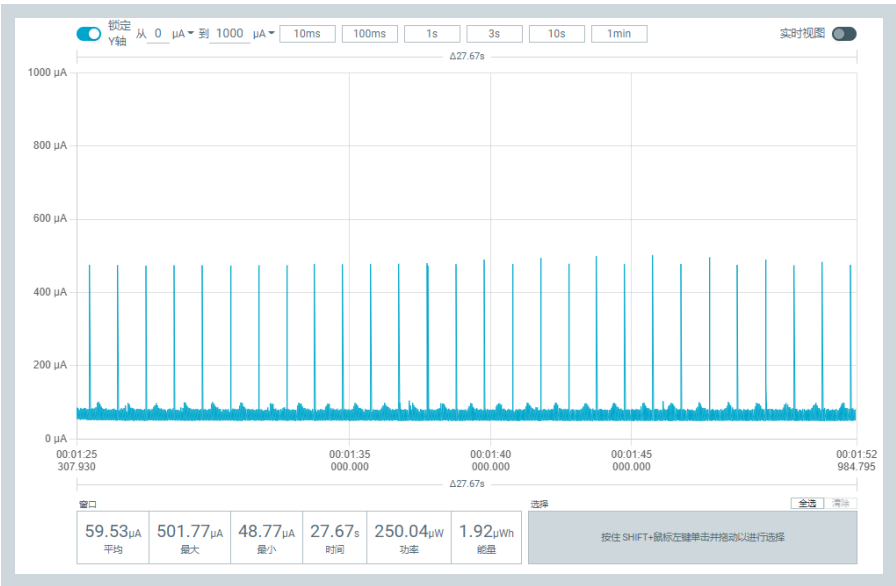
Test result: average 363.79  $\mu$ A



3.10 Current Test Status Diagram:

nRF52840	VDD3.3_EN	LED1~3	Screen backlight	GPS	Ink screen	SX1262	Flash	USB CDC Serial	IIC
System ON Light Sleep	OFF	OFF	OFF	OFF	OFF	Sleep	OFF	OFF	OFF

Test result: average 59.53  $\mu$ A



3.11 Current Test Status Diagram:

nRF52840	VDD3.3_EN	LED1~3	Screen backlight	GPS	Ink screen	SX1262	Flash	USB CDC Serial	IIC
System OFF Deep Sleep	OFF	OFF	OFF	OFF	OFF	Sleep	OFF	OFF	OFF

Test result: average 56.77  $\mu$ A

