

T-Echo-Lite_V1.0 Power Consumption Test Log

Date: 20241030
LastEditTime: 20241210
Test board: T-Echo-Lite_V1.0 (2024-9-26)
Software name: Sleep_Wake_Up.ino
Testing organization: LILYGO Laboratory

1. Test Environment Description

1.1 测试环境
1.1 Test environment

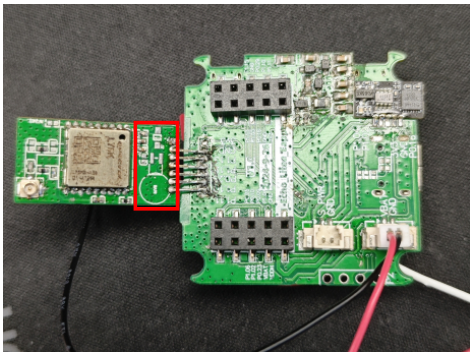
Test Tools	Sampling speed	Test Methodology	Input voltage	Test environment temperature
BLU939	100000 times/s	Battery Interface Measurement	+4.0V	25°C/77°F

1.2 测试的器件型号
1.2 Test device model

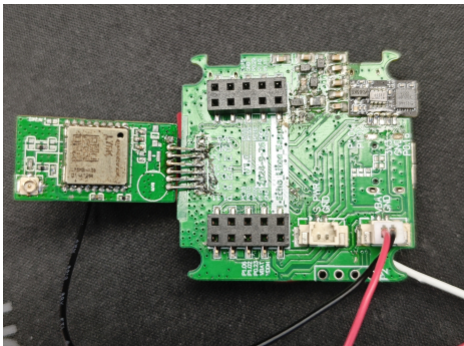
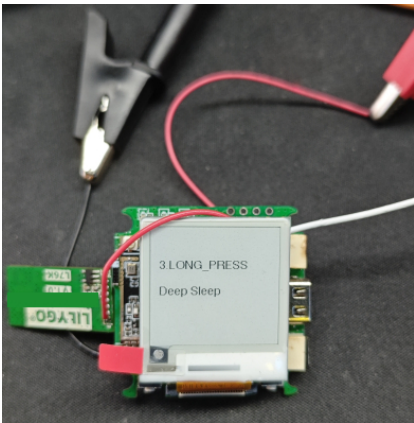
Test device	MCU	Screen	GPS	Lora	Flash	IMU	Power 3.3V
Corresponding model	nRF52840	GDEM0122T61	L76K	S68F(SX1262)	ZD25WQ32CEIGR	ICM20948	RT9080

2. Modification Instructions

2.1 拆除GPS位置的备用电池
2.1 Remove the backup battery for the GPS location



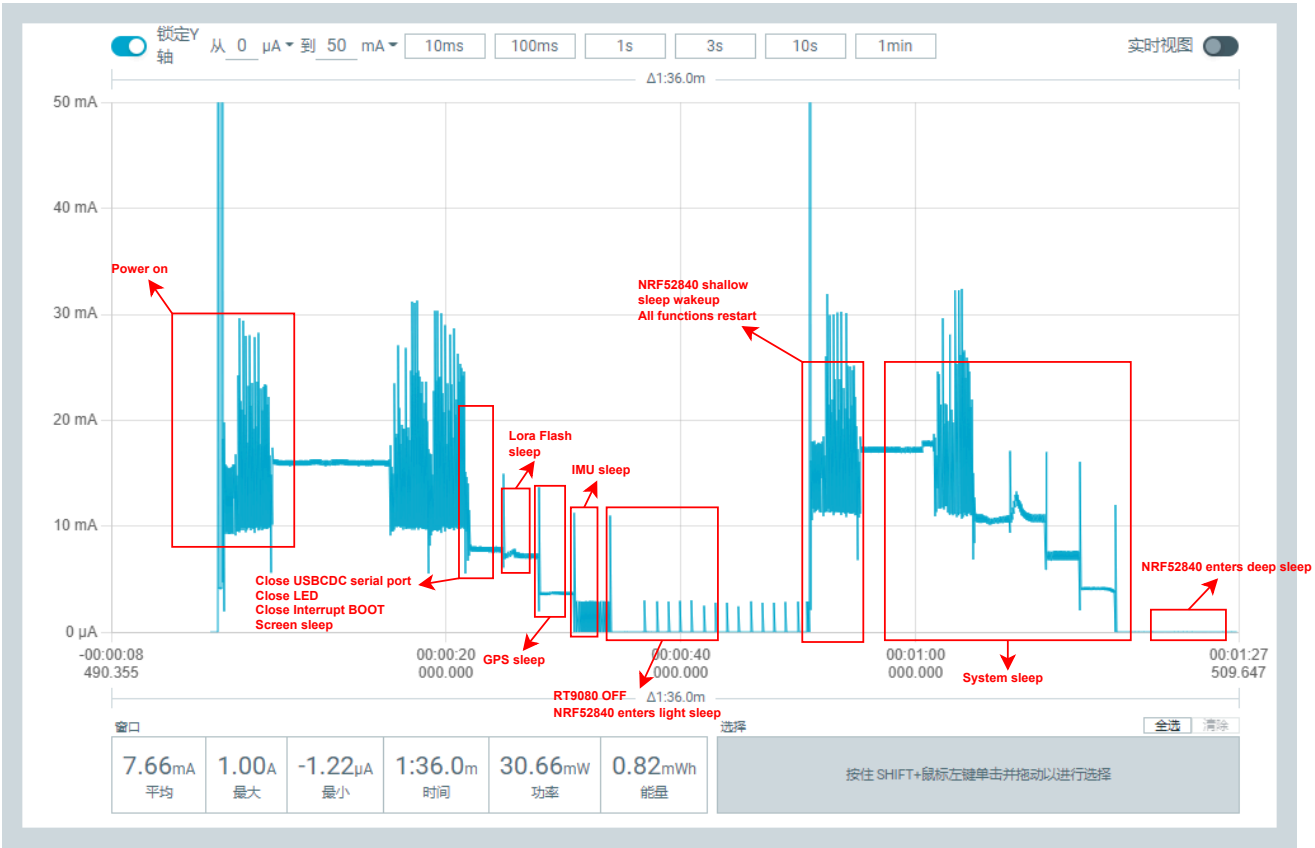
3. Test Physical Object Image



4. Power consumption testing

4.1 总电流变化测试图如下

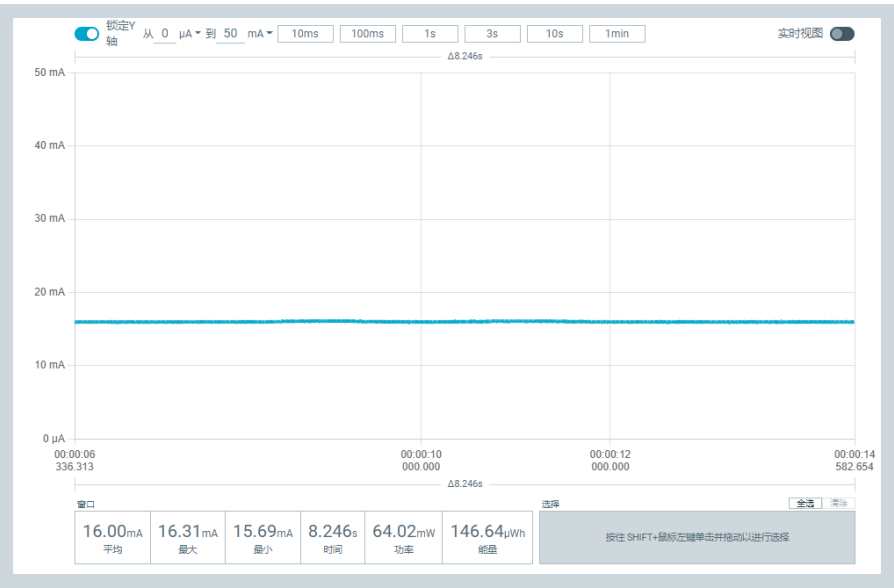
4.1 The test chart depicting the variation of total current is as follows.



4.2 Current Test Status Diagram:

nRF52840	Power 3.3V	LED1~2	GPS	Screen	Lora	Flash	USB CDC Serial	IMU
System ON	ON	ON	ON	Sleep	ON	ON	ON	ON

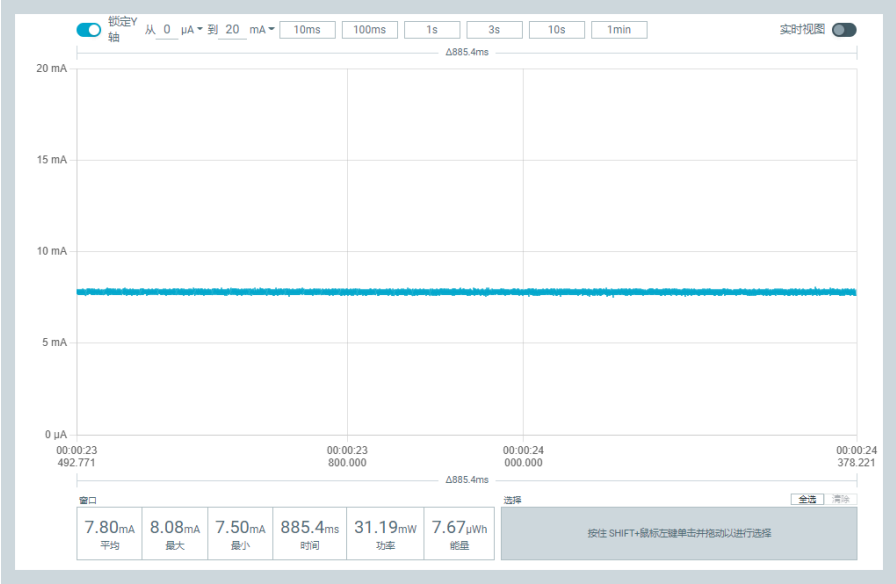
Test result: average 16.00 mA



4.3 Current Test Status Diagram:

nRF52840	Power 3.3V	LED1~2	GPS	Screen	Lora	Flash	USB CDC Serial	IMU
System ON	ON	OFF	ON	Sleep	ON	ON	OFF	ON

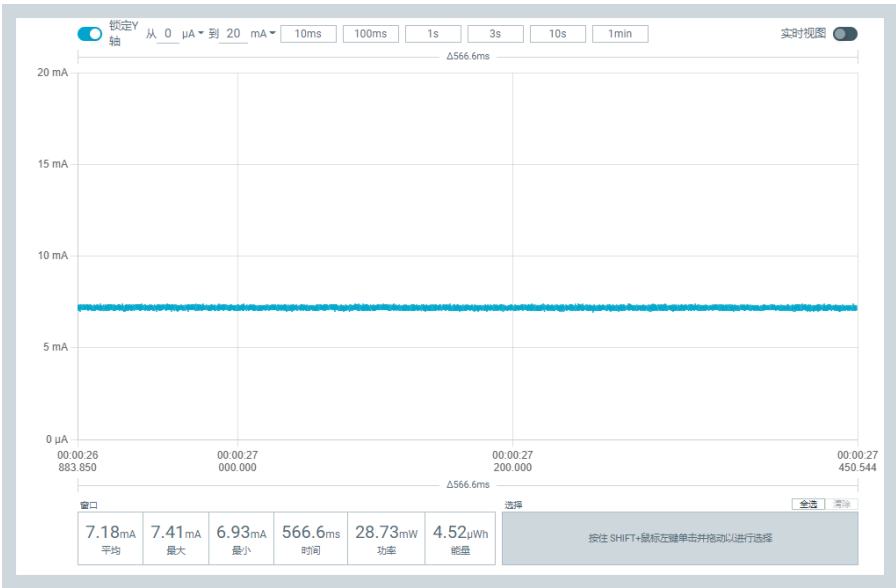
Test result: average 7.80 mA



4.4 Current Test Status Diagram:

nRF52840	Power 3.3V	LED1~2	GPS	Screen	Lora	Flash	USB CDC Serial	IMU
System ON	ON	OFF	ON	Sleep	Sleep	Sleep	OFF	ON

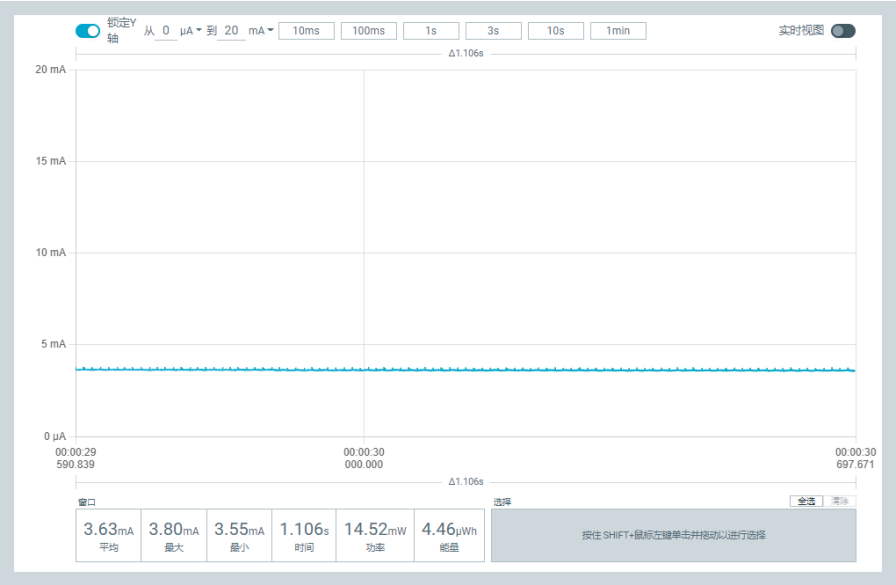
Test result: average 7.18 mA



4.5 Current Test Status Diagram:

nRF52840	Power 3.3V	LED1~2	GPS	Screen	Lora	Flash	USB CDC Serial	IMU
System ON	ON	OFF	Sleep	Sleep	Sleep	Sleep	OFF	ON

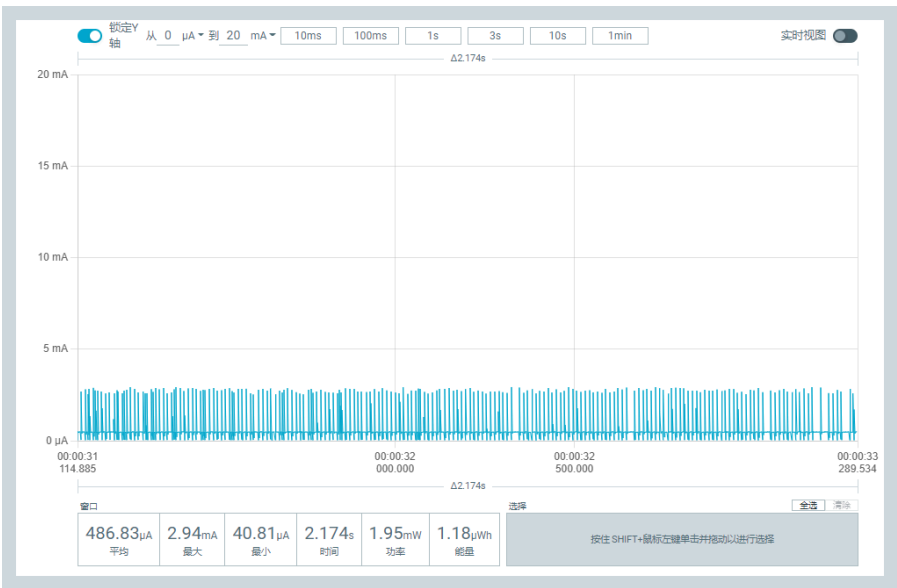
Test result: average 3.63 mA



4.6 Current Test Status Diagram:

nRF52840	Power 3.3V	LED1~2	GPS	Screen	Lora	Flash	USB CDC Serial	IMU
System ON	ON	OFF	Sleep	Sleep	Sleep	Sleep	OFF	Sleep

Test result: average 486.83 μ A



4.7 Current Test Status Diagram:

nRF52840	Power 3.3V	LED1~2	GPS	Screen	Lora	Flash	USB CDC Serial	IMU
System ON Light Sleep	OFF	OFF	Sleep	OFF	OFF	OFF	OFF	OFF

Test result: average 7.02 μ A



4.8 Current Test Status Diagram:

nRF52840	Power 3.3V	LED1~3	GPS	Screen	Lora	Flash	USB CDC Serial	IMU
System OFF Deep Sleep	OFF	OFF	Sleep	OFF	OFF	OFF	OFF	OFF

Test result: average 2.54 μ A

