# TPS65262's LDOs delay and BUCK external delay

1. BOM change from EVM

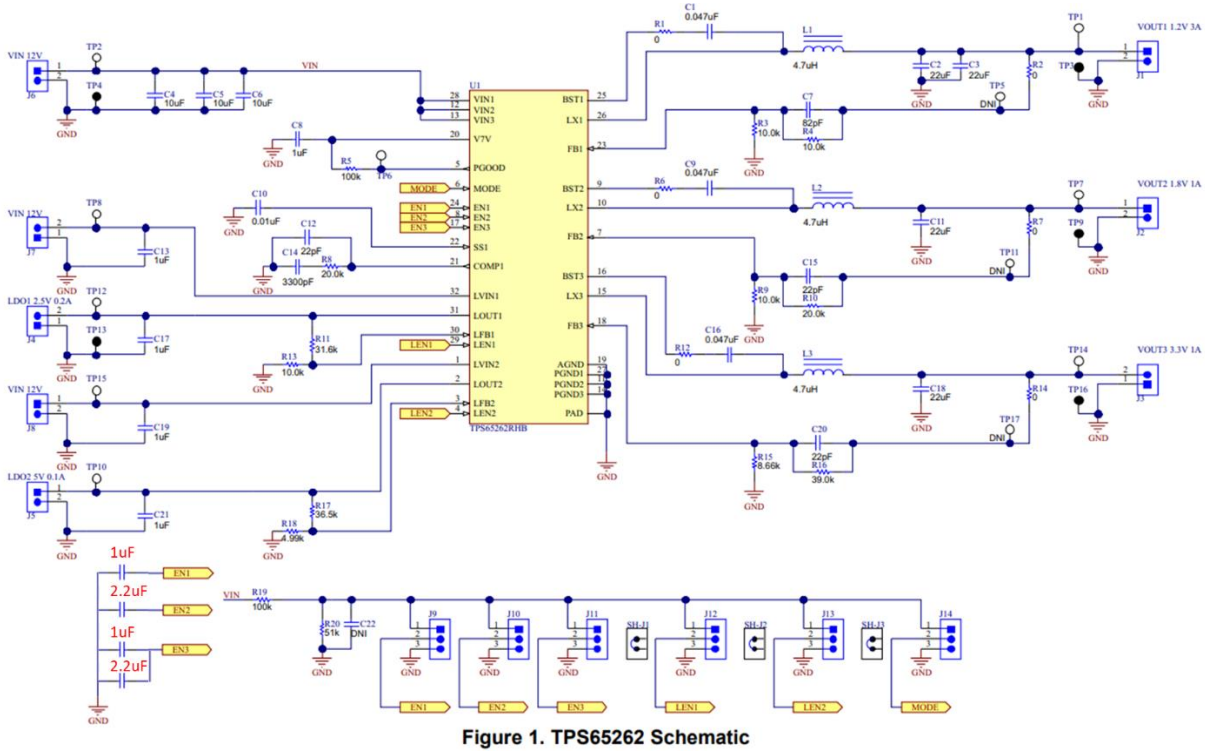



**Figure 1. TPS65262 Schematic**

2. Test method

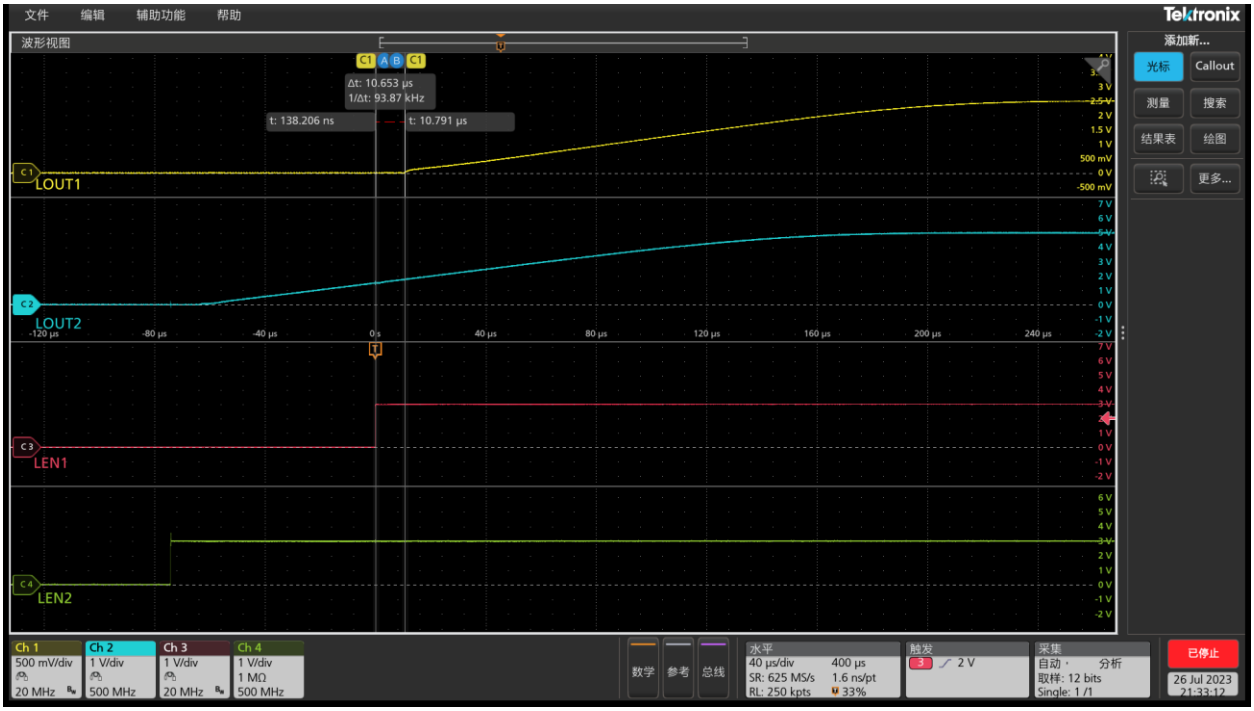
LEN1 and LEN2 are trigged by signal generator in square mode High=3V, Low=0V.
Mode is connected to ground

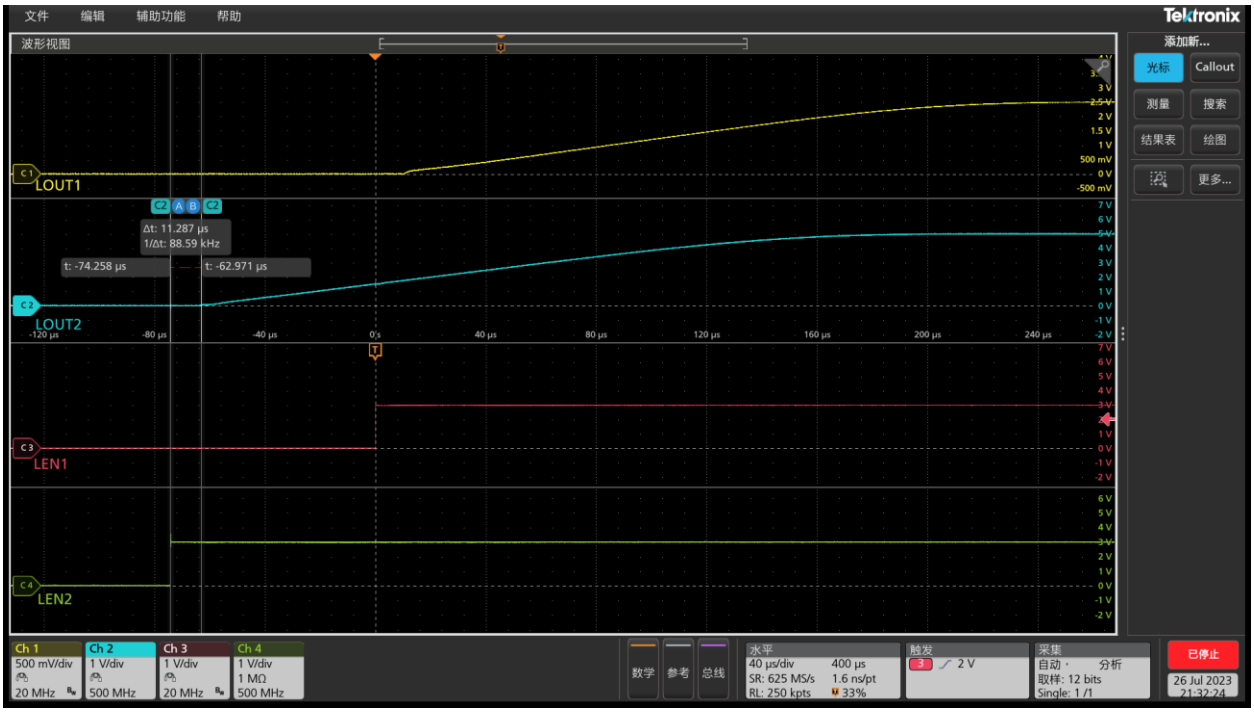
3. Test results

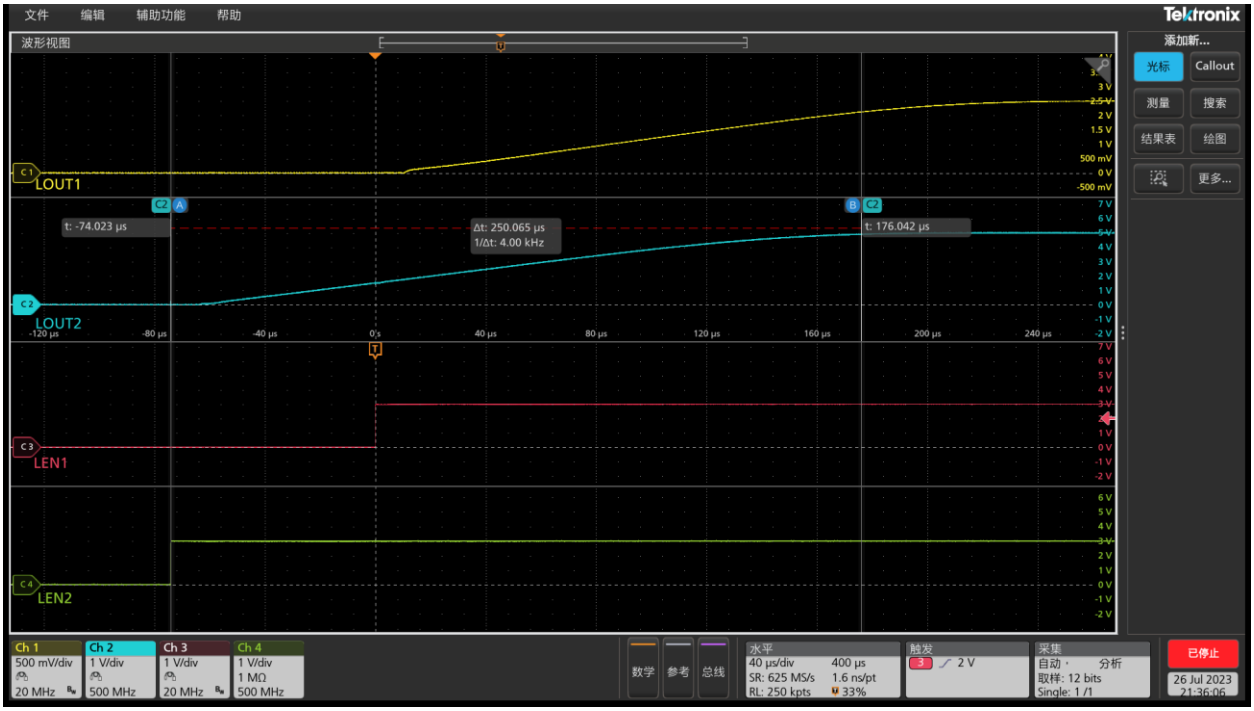
3.1. LDOs delay

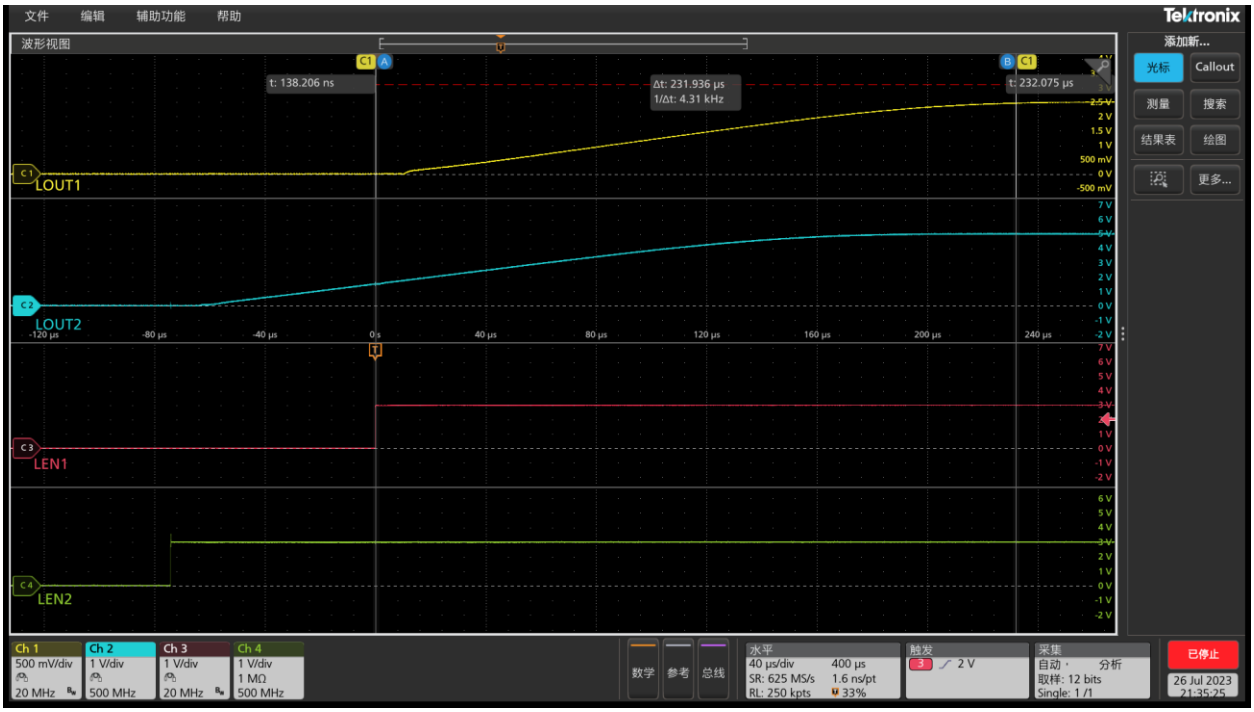
Delay from LEN1 to LOUT1 is 10us

Delay from LEN2 to LOUT2 is 11us


文件
编辑
辅助功能
帮助
Tektronix
波形视图
添加新...
光标
Callout
测量
搜索
结果表
绘图
更多...
Δt: 10.653 µs
1/Δt: 93.87 kHz
t: 138.206 ns
t: 10.791 µs
LOUT1
LOUT2
LEN1
LEN2
Ch 1
500 mV/div
20 MHz
Ch 2
1 V/div
500 MHz
Ch 3
1 V/div
20 MHz
Ch 4
1 V/div
1 MΩ
500 MHz
数学
参考
总线
水平
40 µs/div
400 µs
SR: 625 MS/s
1.6 ns/pt
RL: 250 kpts
33%
触发
2 V
采集
自动
分析
取样: 12 bits
Single: 1 /1
已停止
26 Jul 2023
21:33:12


文件
编辑
辅助功能
帮助
Tektronix
波形视图
添加新...
光标
Callout
测量
搜索
结果表
绘图
更多...
Δt: 11.287 µs
1/Δt: 88.59 kHz
t: -74.258 µs
t: -62.971 µs
LOUT1
LOUT2
LEN1
LEN2
Ch 1
500 mV/div
20 MHz
Ch 2
1 V/div
500 MHz
Ch 3
1 V/div
20 MHz
Ch 4
1 V/div
1 MΩ
500 MHz
数学
参考
总线
水平
40 µs/div
400 µs
SR: 625 MS/s
1.6 ns/pt
RL: 250 kpts
33%
触发
2 V
采集
自动
分析
取样: 12 bits
Single: 1 /1
已停止
26 Jul 2023
21:32:24




3.2. BUCK delay

As I connect Mode to ground and attach CEN1=1uF, CEN2=2.2uF and CEN3=3.2uF, start delay of VOUT1 should be CEN1*(0.4V/1.4uA+0.8V/3.6uA)=1*(0.4/1.4+0.8/3.6)=0.5s;

VOUT2 delay should be 0.5*2.2s.

VOUT3 delay should be 0.5*3.2s.

The VOUT1 delay on EVM is 330ms

The VOUT2 delay on EVM is 608ms

The VOUT3 delay on EVM is 926ms

The difference between calculated delay and actual delay is caused by the difference of Mode pull-up current.

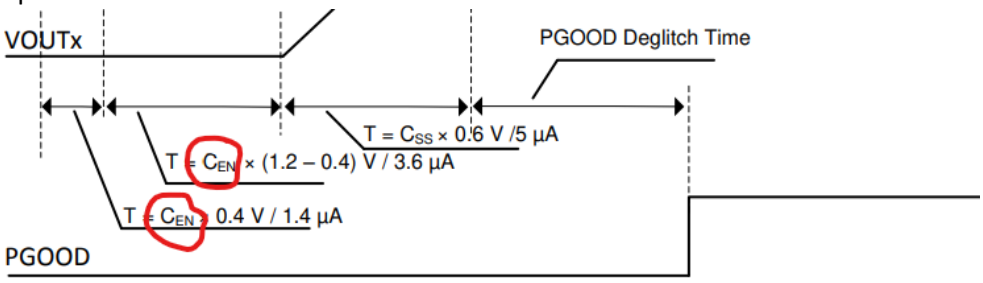
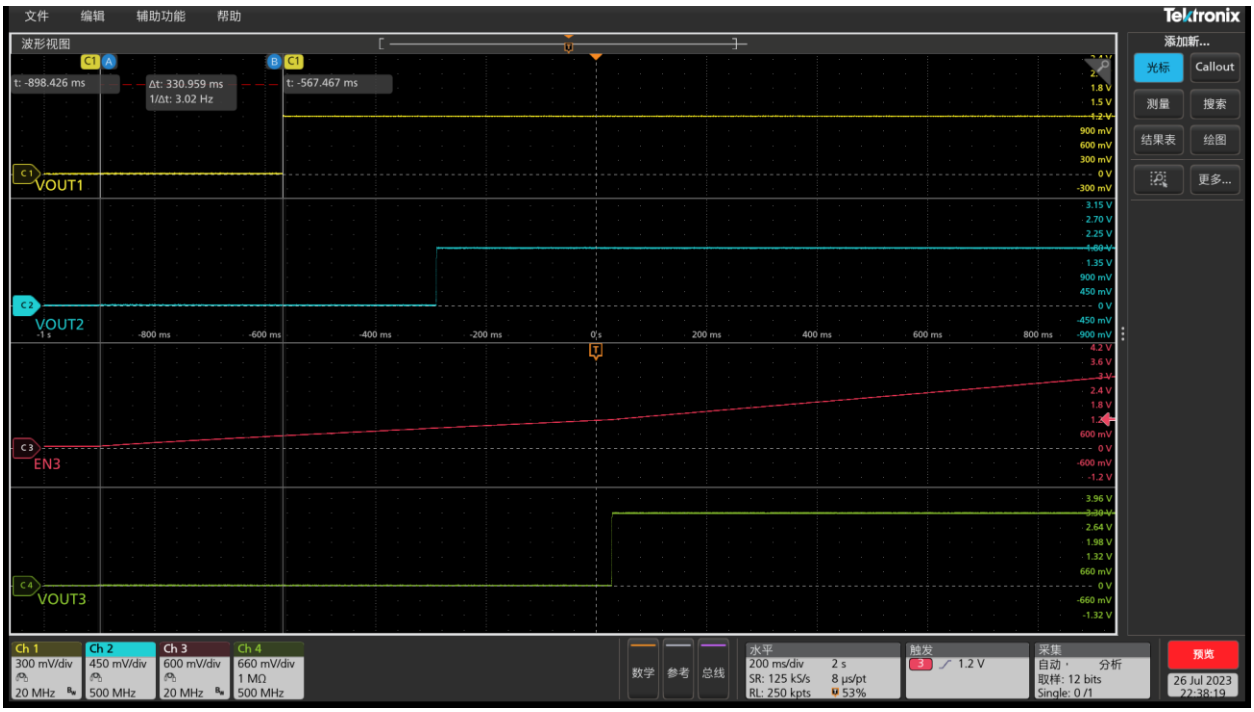
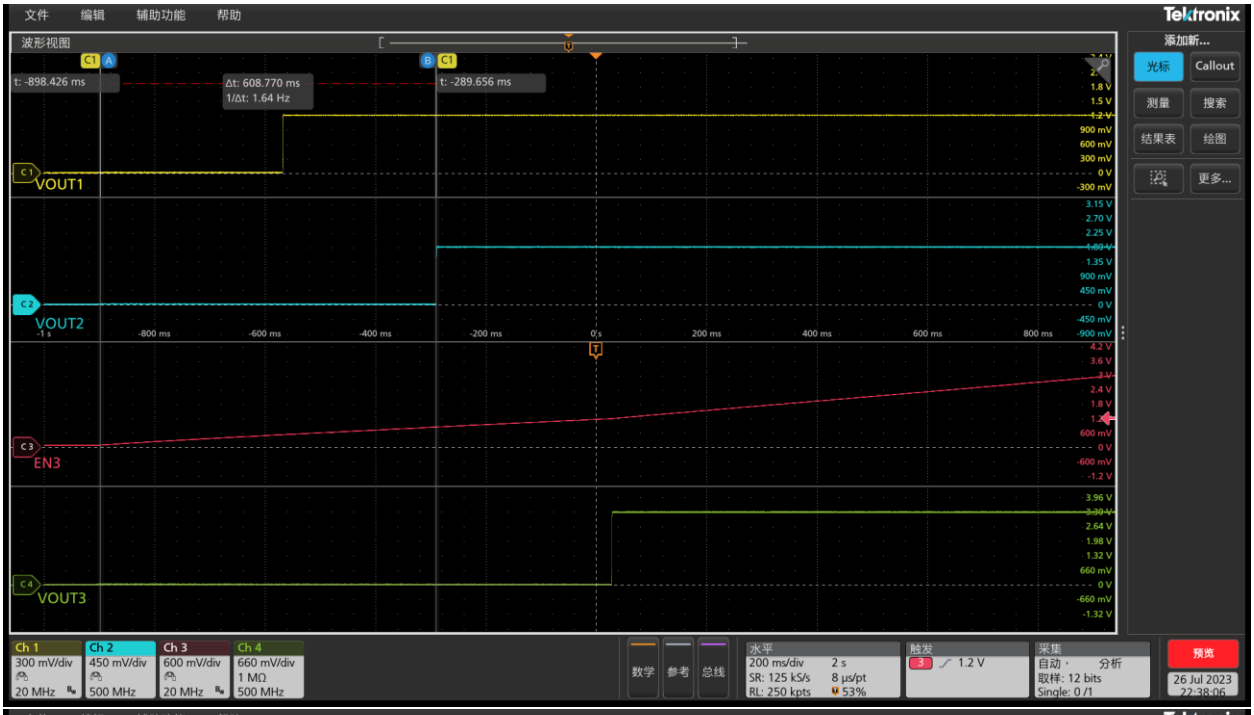
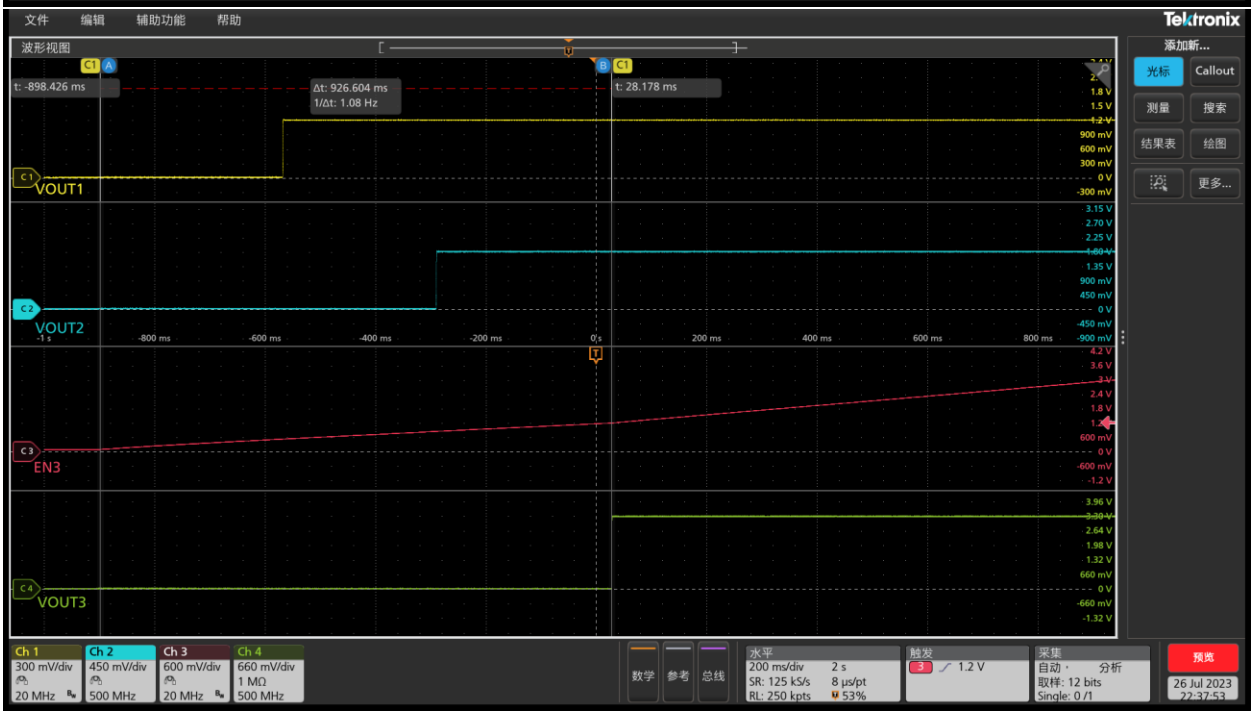



**Figure 8-3. Startup Power Sequence**




文件 编辑 辅助功能 帮助
Tektronix
波形视图
添加新...
光标 Callout
测量 搜索
结果表 绘图
更多...
t: -898.426 ms
Δt: 608.770 ms
1/Δt: 1.64 Hz
t: -289.656 ms
VOUT1
VOUT2
EN3
VOUT3
-800 ms -600 ms -400 ms -200 ms 0 s 200 ms 400 ms 600 ms 800 ms
Ch 1 300 mV/div 20 MHz
Ch 2 450 mV/div 500 MHz
Ch 3 600 mV/div 20 MHz
Ch 4 660 mV/div 1 MΩ 500 MHz
数学 参考 总线
水平 200 ms/div 2 s SR: 125 kS/s 8 µs/pt RL: 250 kpts 53%
触发 1.2 V
采集 自动 分析 取样: 12 bits Single: 0 /1
预览
26 Jul 2023 22:38:06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Tektronix
波形视图
添加新...
光标 Callout
测量 搜索
结果表 绘图
更多...
t: -898.426 ms
Δt: 926.604 ms
1/Δt: 1.08 Hz
t: 28.178 ms
VOUT1
VOUT2
EN3
VOUT3
-800 ms -600 ms -400 ms -200 ms 0 s 200 ms 400 ms 600 ms 800 ms
Ch 1 300 mV/div 20 MHz
Ch 2 450 mV/div 500 MHz
Ch 3 600 mV/div 20 MHz
Ch 4 660 mV/div 1 MΩ 500 MHz
数学 参考 总线
水平 200 ms/div 2 s SR: 125 kS/s 8 µs/pt RL: 250 kpts 53%
触发 1.2 V
采集 自动 分析 取样: 12 bits Single: 0 /1
预览
26 Jul 2023 22:37:53