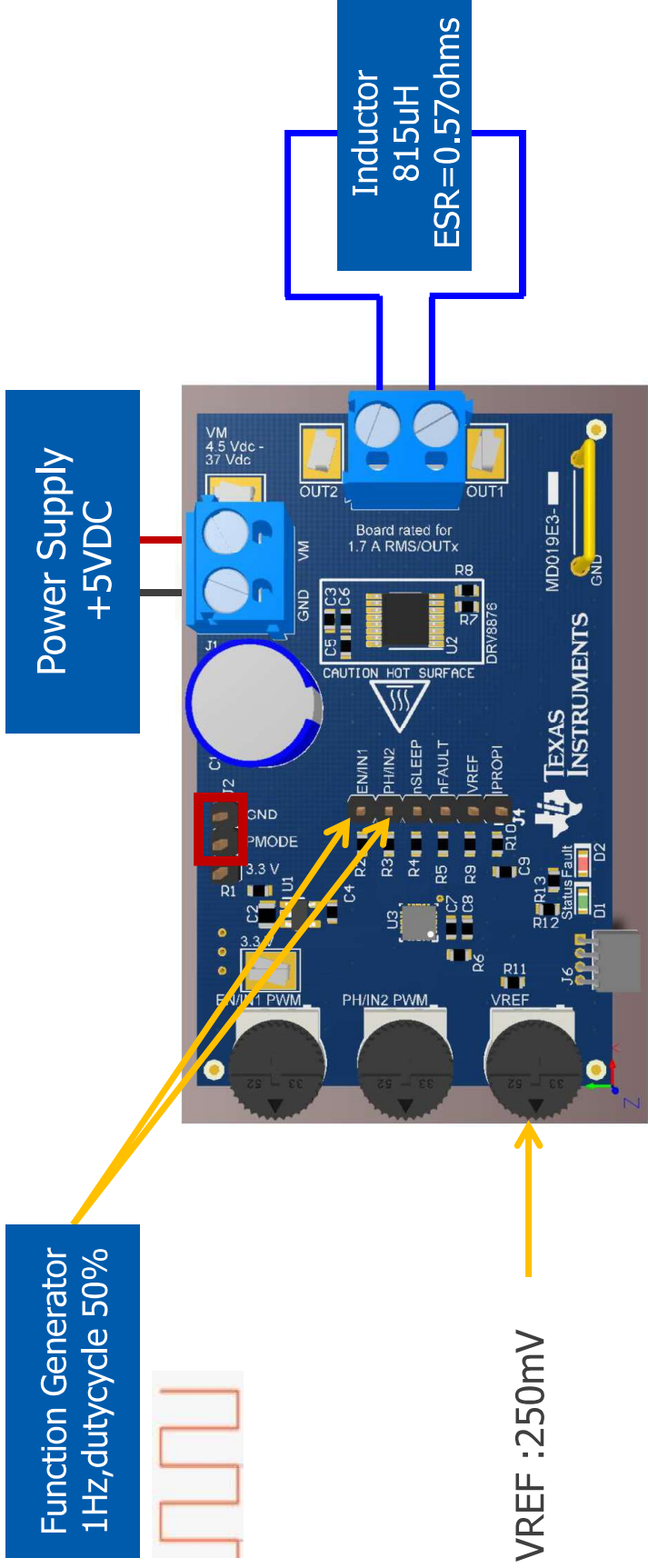


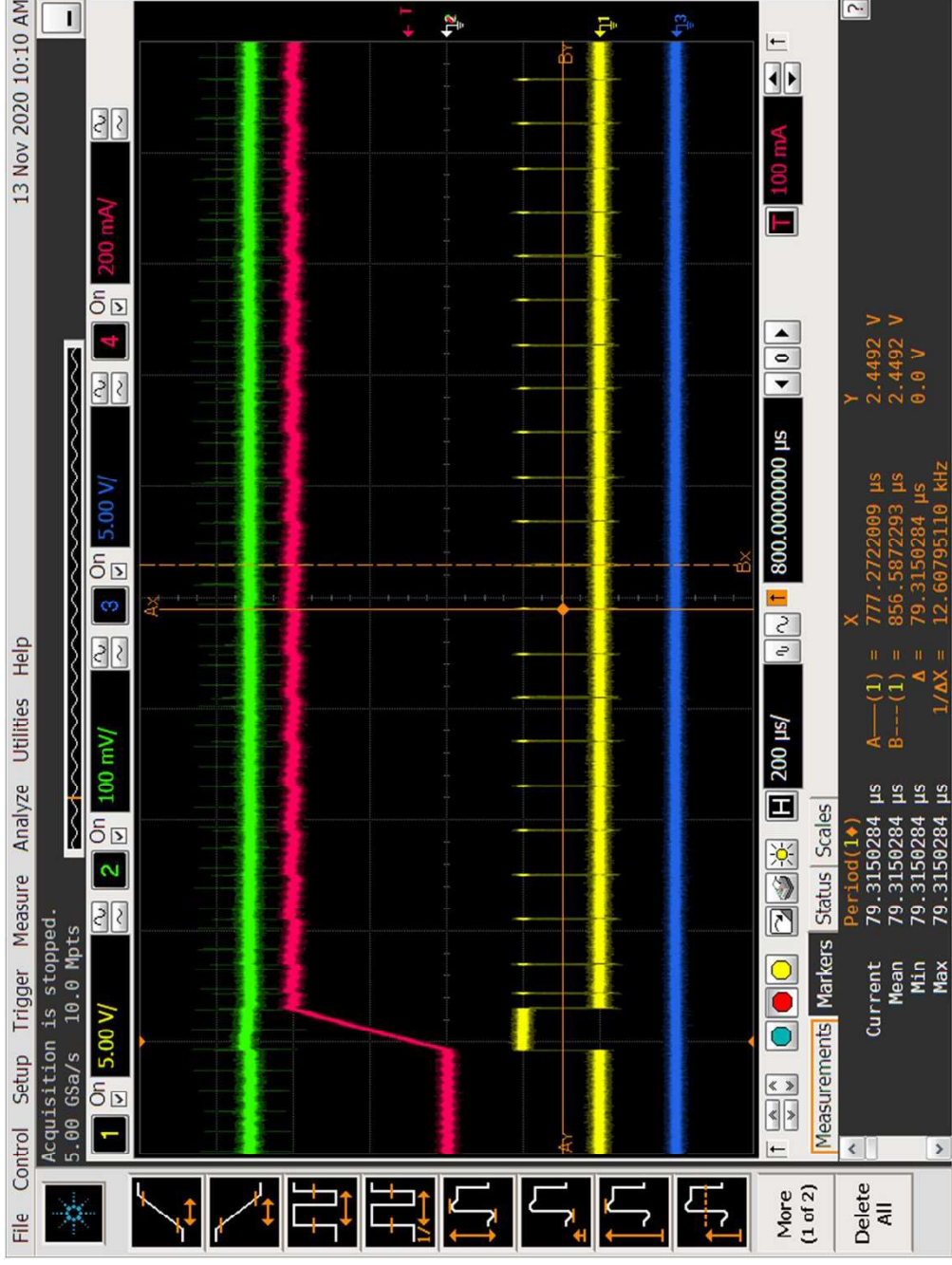
DRV8874 Evaluation Module

Evaluation results are described below.

Operation MODE
PMode: PH/EN Control Mode
IMode: Fixed Off Time
Itrip: 366mA
Load: 815uH (ESR=0.57ohms)



DRV8874 Evaluation Module



《《Operating MODE》》

P MODE: PH/EN Control Mode
I MODE: Fixed Off Time
Itrip: 366mA
Load: 815uH (ESR=0.57ohms)

《《Comments》》

Wave forms of the module are correct. Our understanding and the data sheet are the same.

《《Signals》》

- VREF : about 250mVdc
- Inductor Current : about 400mA
- OUT1 Voltage : 0V-5V swing
- OUT2 Voltage : 0V

Simulation result using the evaluation condition of the module

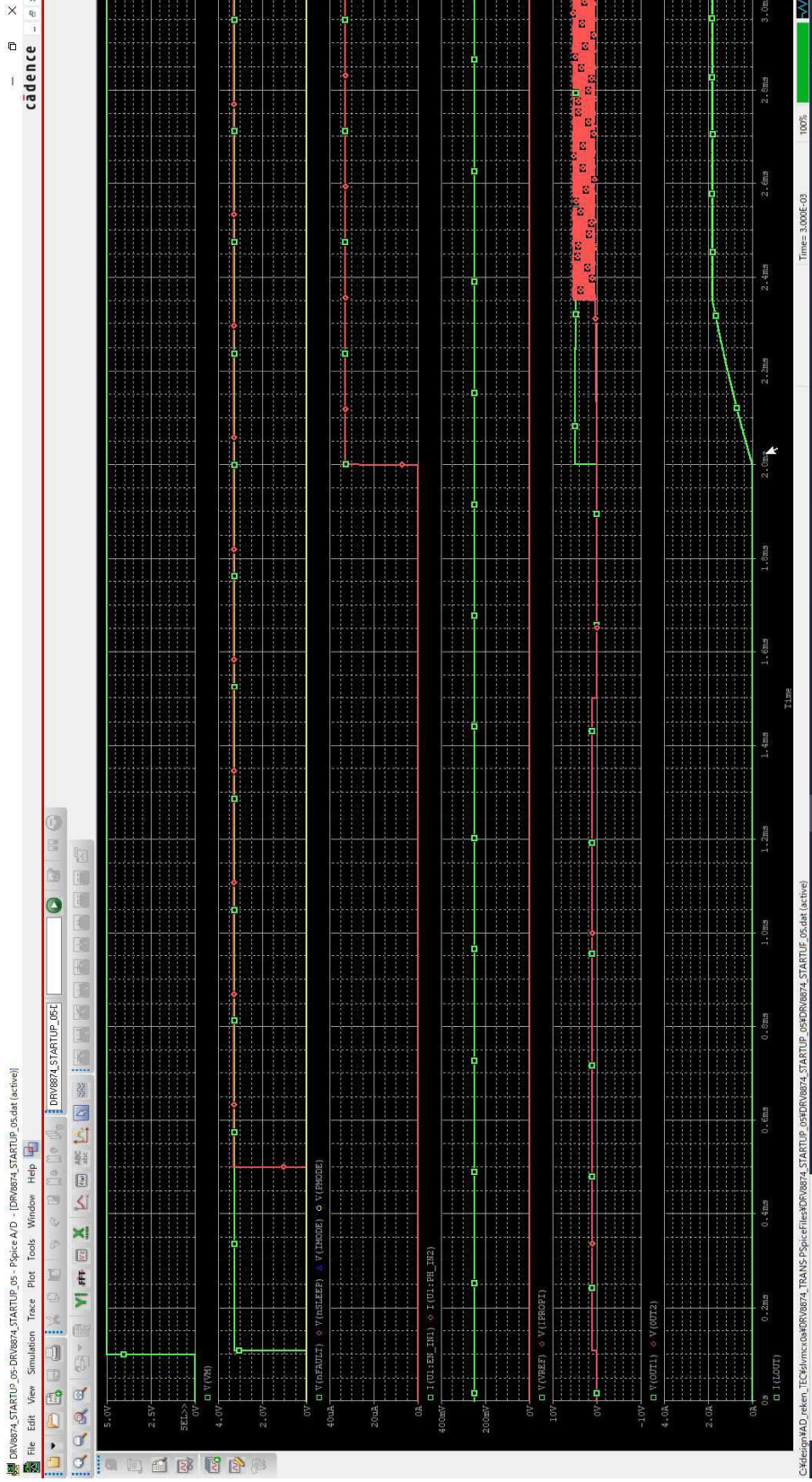
Operation MODE
PMODE: PH/EN Control Mode
IMODE: Fixed Off Time
Itrip: 366mA
Load: 815uH (ESR=0.57ohms)

<<Operation MODE>>
PMODE: PH/EN Control Mode
IMODE: Fixed Off Time
Itrip: 366mA
Load : 815uH + 570mOhms

The circuit schematic shows the DRV8874 Transient Model. Key components and connections include:

- Power Supply:** VCC (3.3V) connected to EN_IN1 and PH_IN2.
- Control:** nSLEEP connected to PH_IN2.
- Feedback:** nFAULT connected to PH_IN2.
- Reference:** VREF connected to PH_IN2.
- Current Sense:** IPROPI connected to PH_IN2.
- Mode:** IMODE connected to PH_IN2.
- Motor:** OUT1 and OUT2 connected to the motor terminals.
- Load:** LOUT (815uH) and LROUT (570m) connected to the motor terminals.
- Measurement:** V1 (0V), V2 (3.3V), V3 (3.3V), V6 (0V) are used for simulation analysis.

Simulation result using the evaluation condition of the module



《Operation MODE》

Operation MODE
P MODE: PH/EN Control Mode
I MODE: Fixed Off Time
Itrip: 366mA
Load: 815uH (ESR=0.57ohms)

《Comments》

Wave form : 2ms ~ 2.5ms.
PH/EN is operated from 2ms.

Itrip setting is 366mA.
but the current(from out2 to out1)
is about 1.8A.

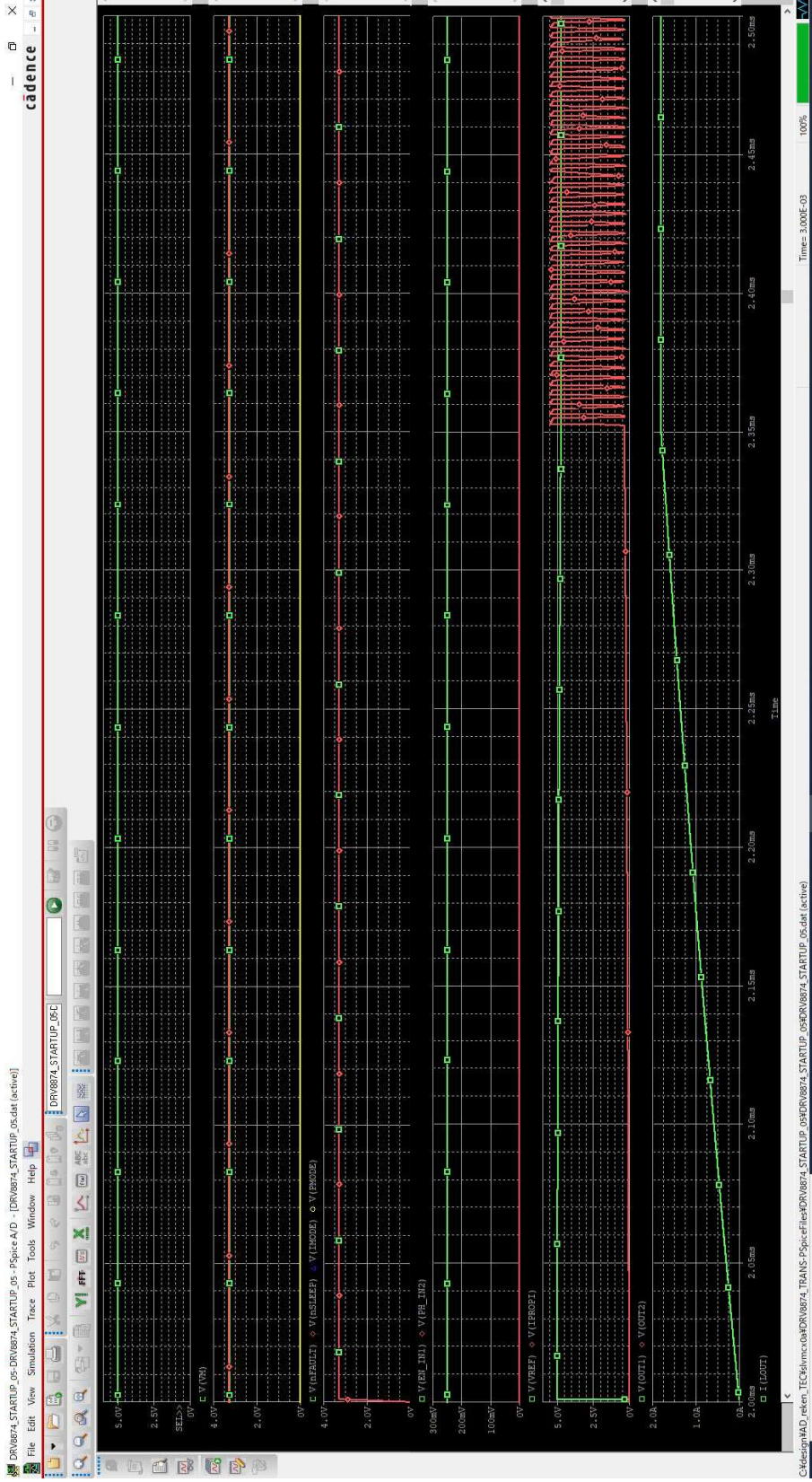
the current(from out2 to out1) is
different from Itrip setting.

《Request》

The simulation result and the
module evaluation result are
different.

Please revise the Pspice model.

Simulation result using the evaluation condition of the module



《Operation MODE》

Operation MODE
P MODE: PH/EN Control Mode
I MODE: Fixed Off Time
Itrip: 366mA
Load: 815uH (ESR=0.57ohms)

《Comments》

Wave form : 2ms ~ 2.5ms.
PH/EN is operated from 2ms.

Itrip setting is 366mA,
but the current(from out2 to out1)
is about 1.8A.

the current(from out2 to out1) is
different from Itrip setting.

《Request》

The simulation result and the
module evaluation result are
different.

Please revise the Pspice model.