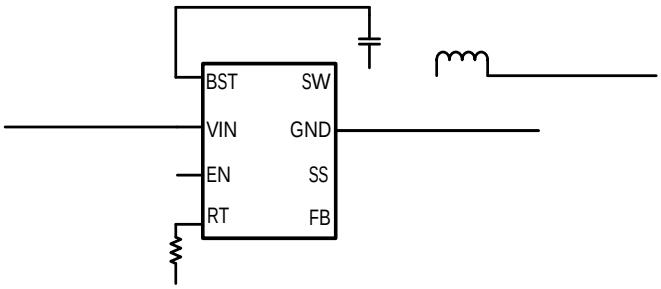
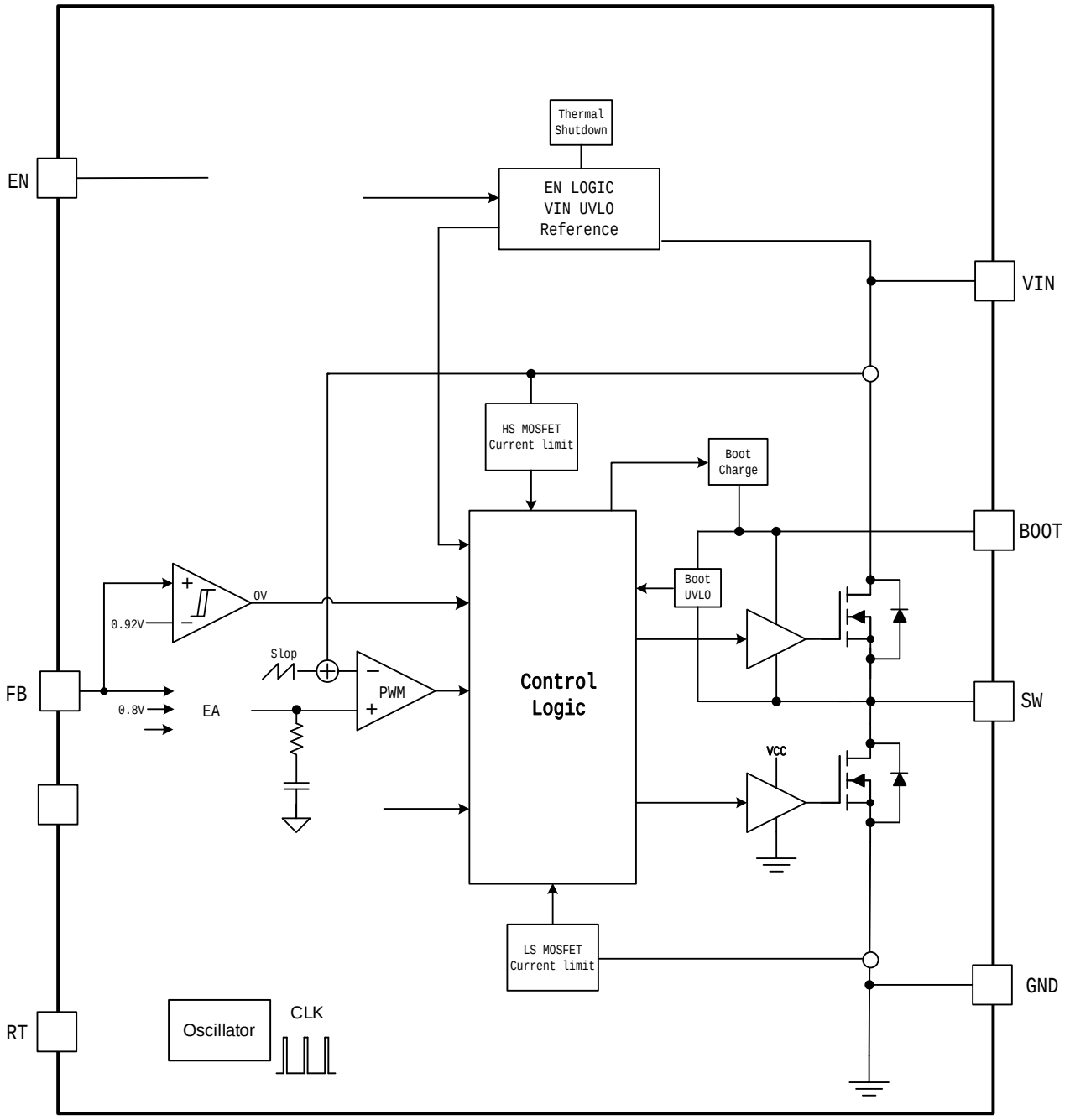
3.8V-30V Vin, 3A, High Efficiency Synchronous Step-down DCDC Converter



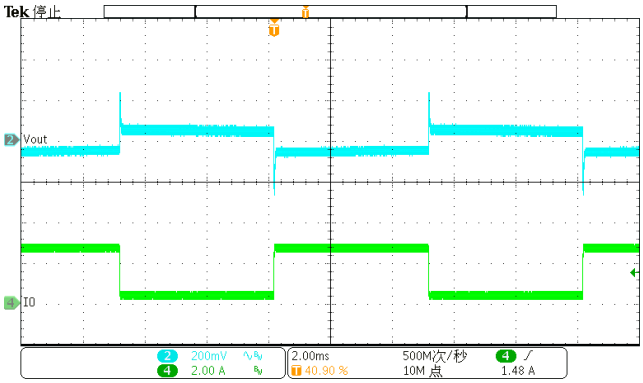
3.8V-30V, Synchronous Buck Converter
Simplified schematic diagram

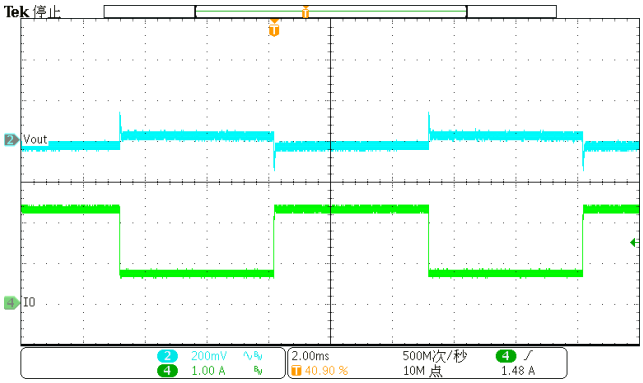
.

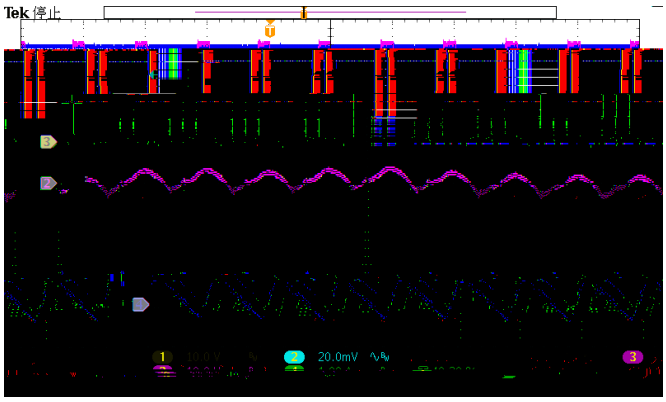

Thermal Shutdown
EN
EN LOGIC
VIN UVLO
Reference
VIN
HS MOSFET
Current limit
Boot
Charge
BOOT
Boot
UVLO
OV
0.92V
Slop
PWM
FB
0.8V
EA
Control
Logic
SW
VCC
LS MOSFET
Current limit
GND
RT
Oscillator
CLK

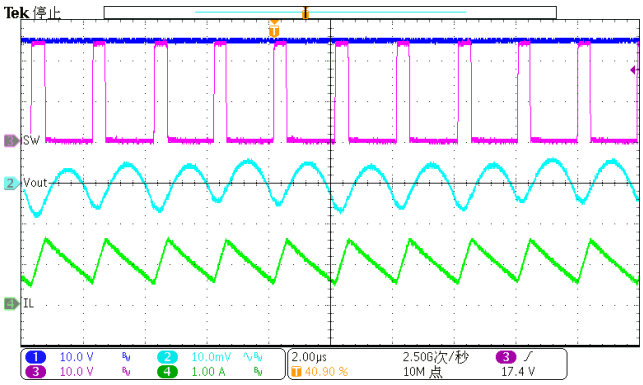
.ì¬Ñ2XÊÍ šàen-US S U R %8„!c 2 Q G X F W R U 6 H ‘ a’’ç”d¢sp0 S U SˆB 0 .ì¬Ña® F H’•J’7 S U R 5%A 0 K H U H

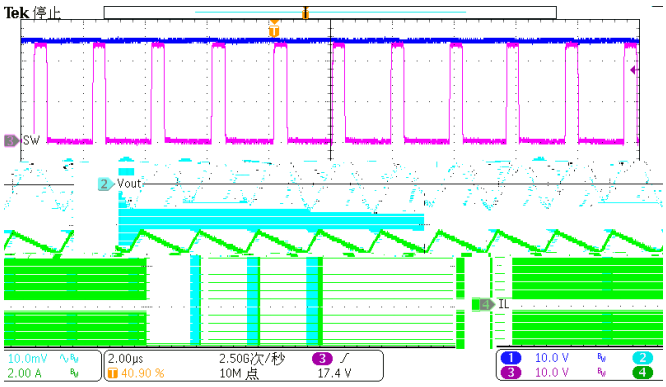
VOUT	FREQUENCY	R1	R2	R_{RT}	L1		COUT
5V	500kHz	53.6 kΩ	10.2 kΩ	Floating	6.8 uH	Optional	44uF
12V	500kHz	143 kΩ	10.2 kΩ	Floating	15 uH	Optional	44uF
5V	1.15M						


Tek 停止
Vout
IO
200mV
2.00 A
2.00ms
40.90 %
500M次/秒
10M 点
1.48 A

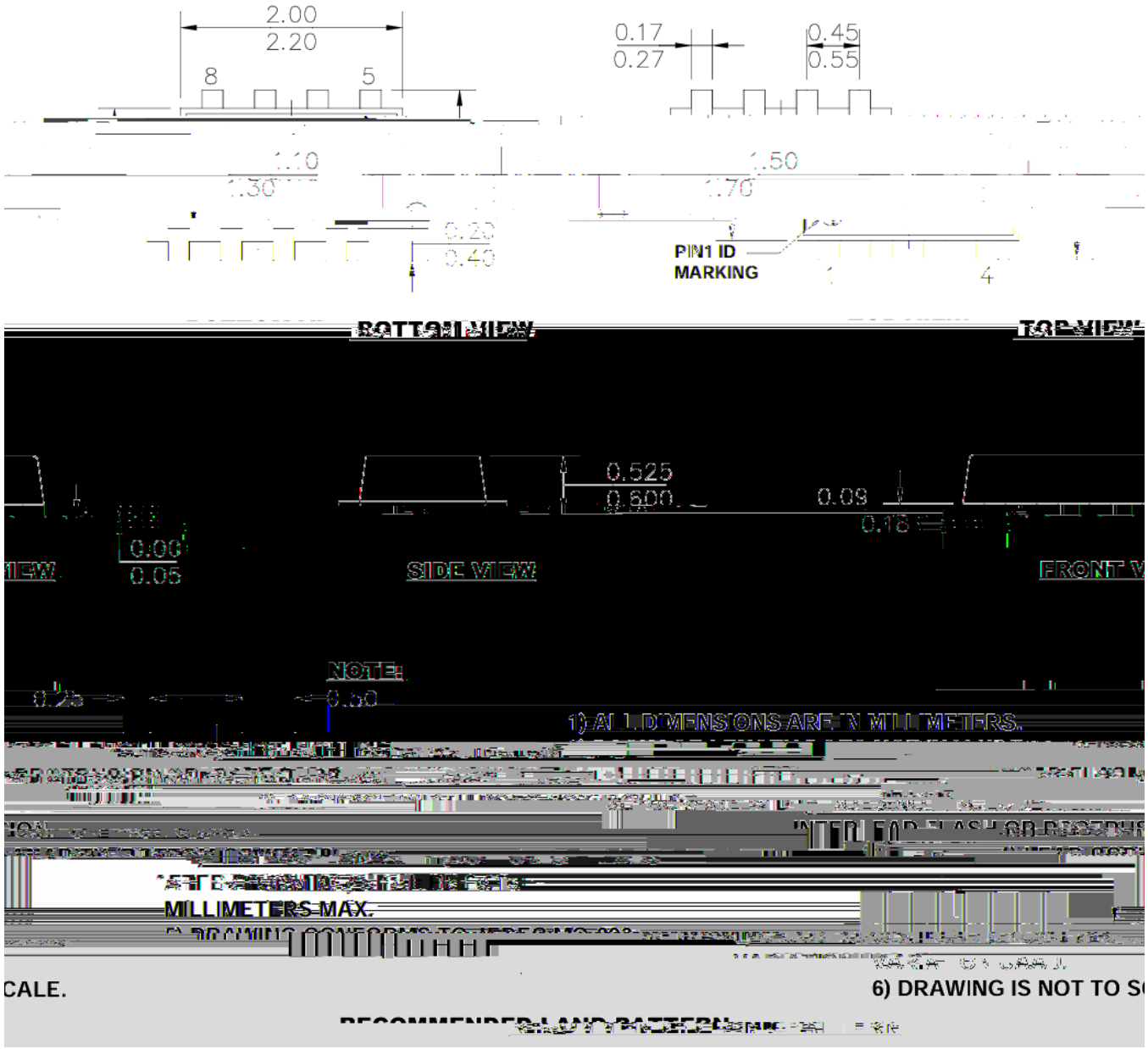

Tek 停止
Vout
IO
200mV
1.00 A
2.00ms
40.90 %
500M次/秒
10M 点
1.48 A


Tek 停止
20.0mV

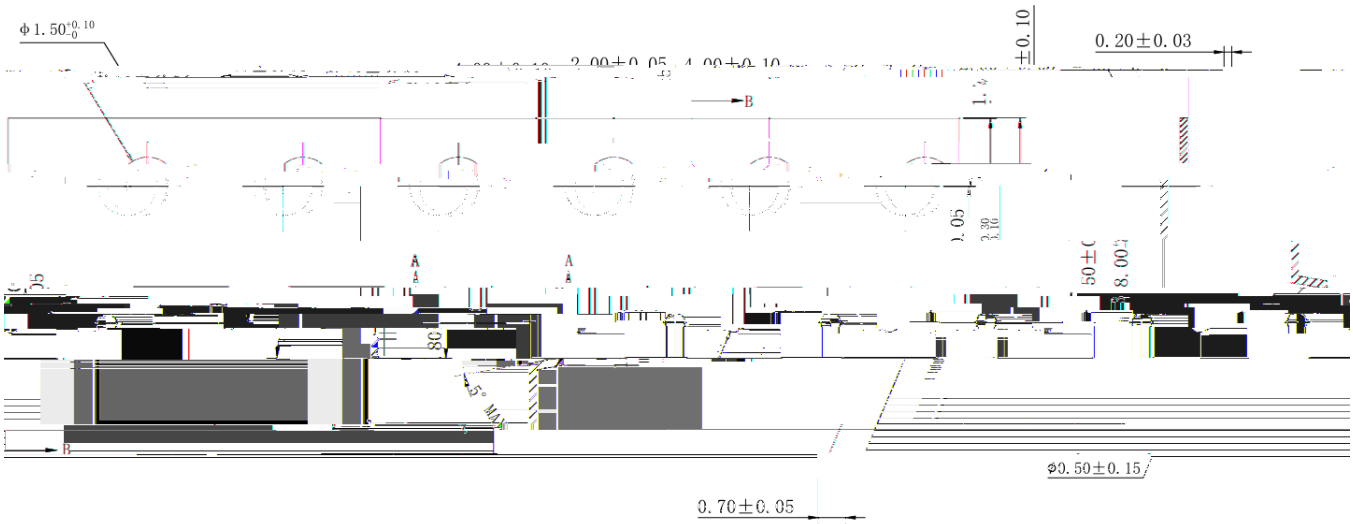

Tek 停止
SW
Vout
IL
10.0 V
10.0 V
10.0mV
1.00 A
2.00µs
40.90 %
2.50G次/秒
10M 点
17.4 V


Tek 停止
SW
Vout
IL
10.0mV
2.00 A
2.00µs
40.90 %
2.50G次/秒
10M 点
17.4 V
10.0 V
10.0 V

FLUKE
72.7°C
自动 1
78.3
24.1
ε=0.95
BG=25.0
01:08:45 PM


2.00
2.20
8
5
0.17
0.27
0.45
0.55
1.10
1.30
1.50
1.70
0.20
0.40
PIN1 ID
MARKING
1
4
BOTTOM VIEW
TOP VIEW
0.525
0.600
0.09
0.18
0.00
0.05
SIDE VIEW
NOTE:
1) ALL DIMENSIONS ARE IN MILLIMETERS.
MILLIMETERS MAX.
CALE.
6) DRAWING IS NOT TO S

13.1±1.3
SCALE 2:1
SCALE 2:1


0.20±0.03
0.70±0.05
B - B
PIN1
2.10±0.05
A - A