4.5V-100V Vin, 1.2A, Step-down DCDC Converter

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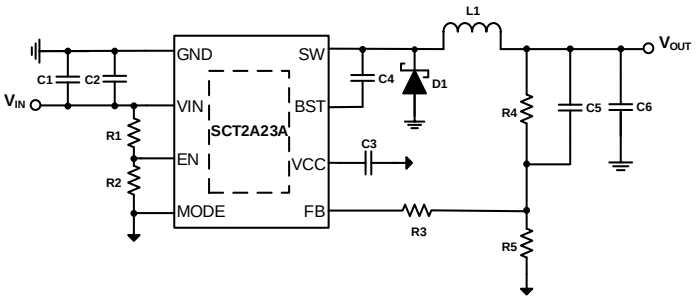
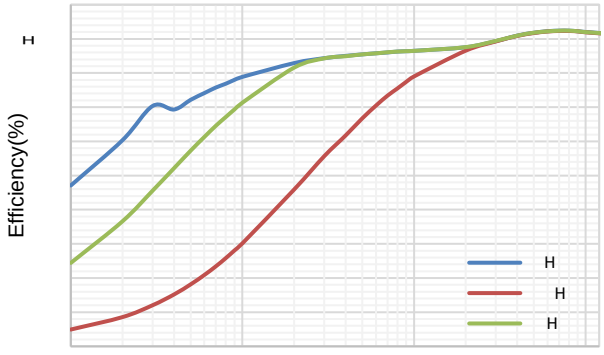
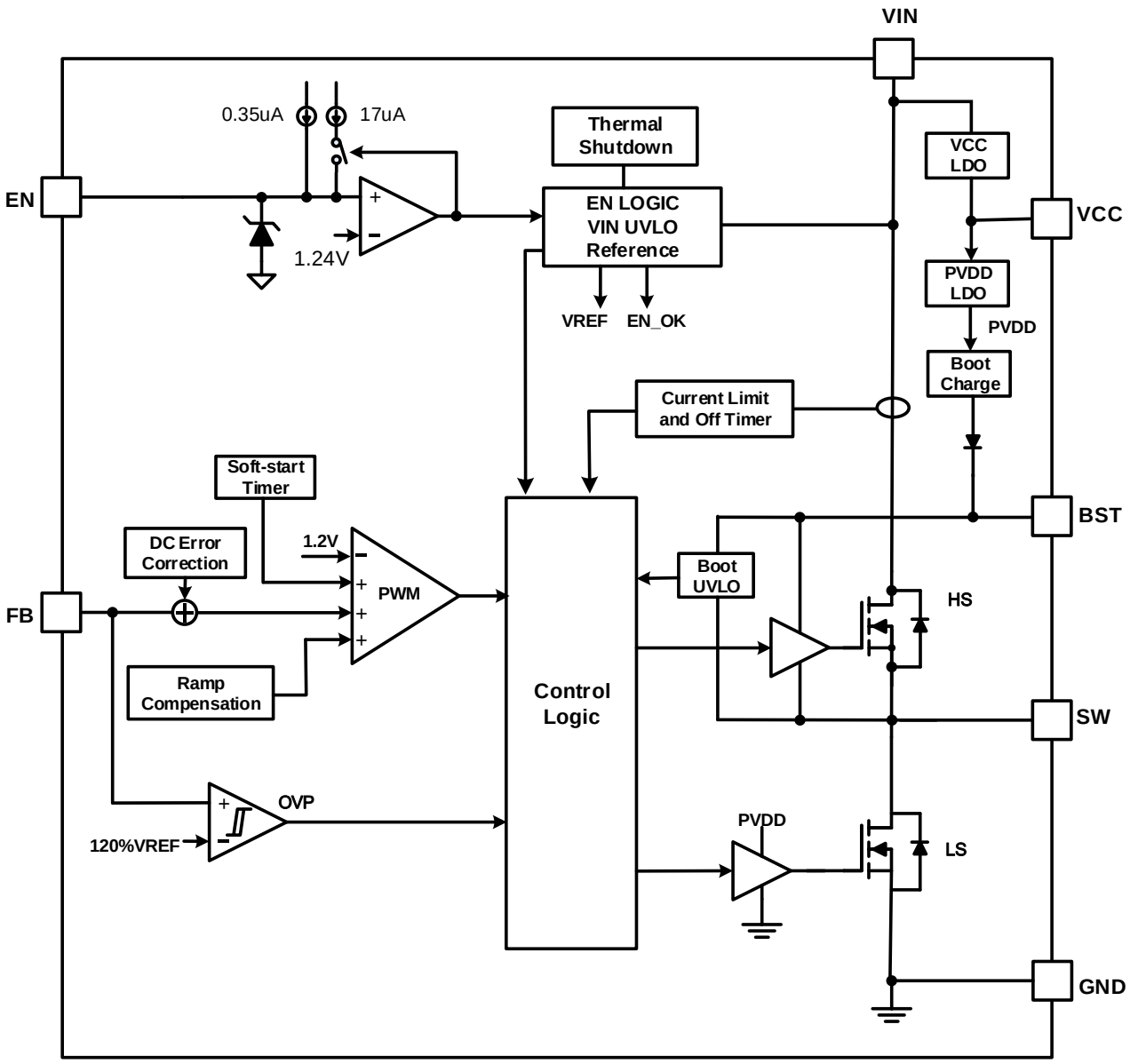
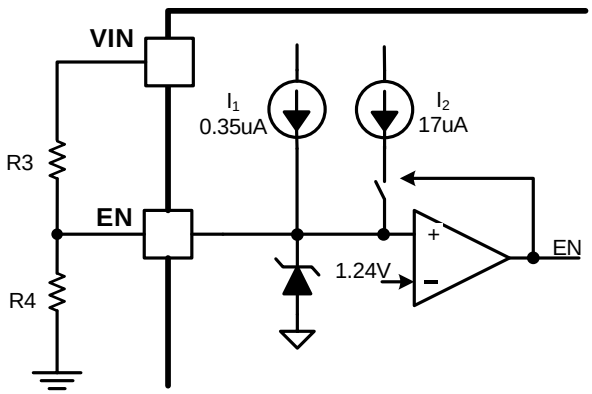


4.5V-100V, Buck Converter



(1)
(2)


VIN
0.35uA
17uA
Thermal Shutdown
VCC LDO
EN
VCC
EN LOGIC VIN UVLO Reference
1.24V
PVDD LDO
PVDD
VREF
EN_OK
Boot Charge
Current Limit and Off Timer
Soft-start Timer
BST
DC Error Correction
1.2V
PWM
Boot UVLO
HS
FB
Ramp Compensation
Control Logic
SW
OVP
120%VREF
PVDD
LS
GND


VIN
I1
0.35uA
I2
17uA
R3
EN
1.24V
EN
R4

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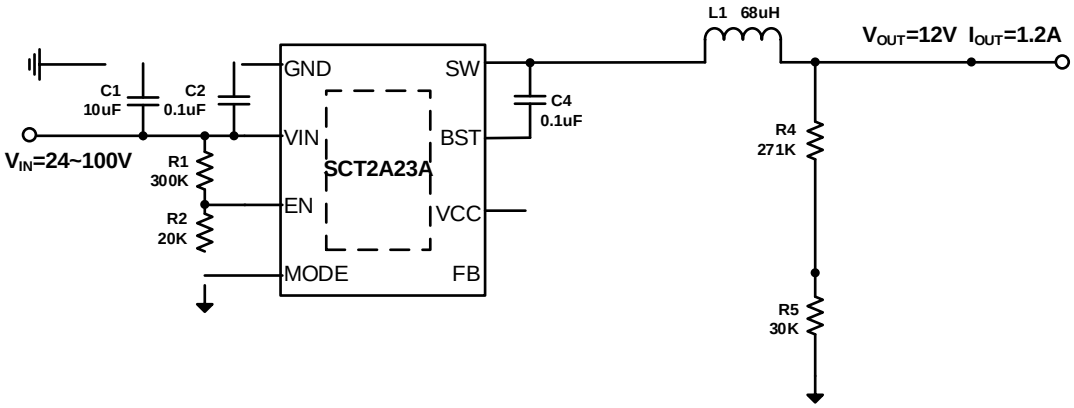
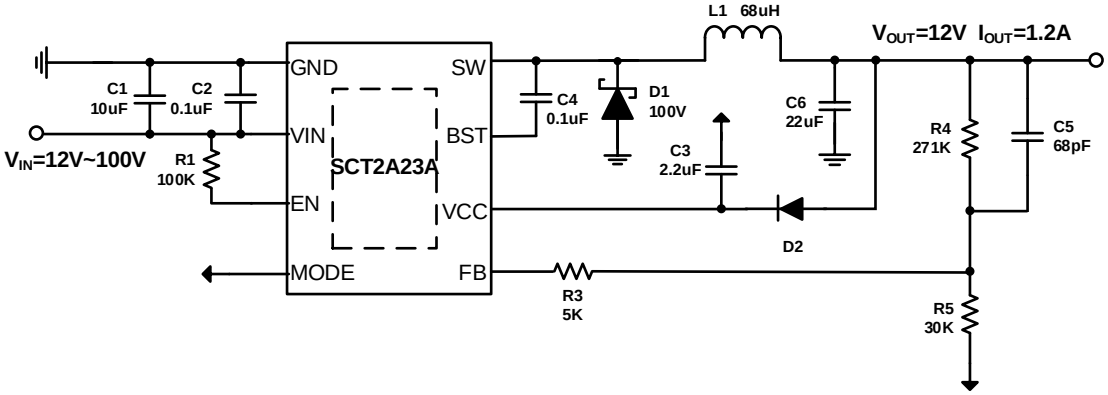

L1 68uH
VOUT=12V IOUT=1.2A
C1
10uF
C2
0.1uF
VIN=24~100V
R1
300K
R2
20K
GND
SW
VIN
BST
SCT2A23A
EN
VCC
MODE
FB
C4
0.1uF
R4
271K
R5
30K


L1 68uH
VOUT=12V IOUT=1.2A
GND
SW
C1
10uF
C2
0.1uF
VIN
BST
SCT2A23A
C4
0.1uF
D1
100V
C6
22uF
R4
271K
C5
68pF
VIN=12V~100V
R1
100K
C3
2.2uF
EN
VCC
D2
MODE
FB
R3
5K
R5
30K

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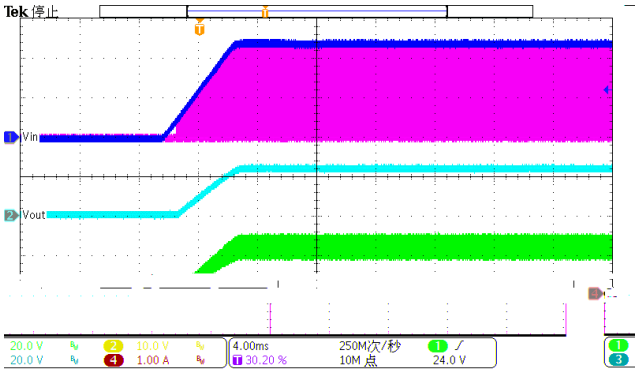
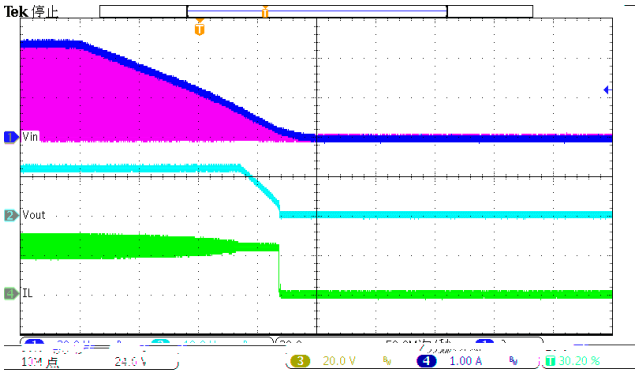
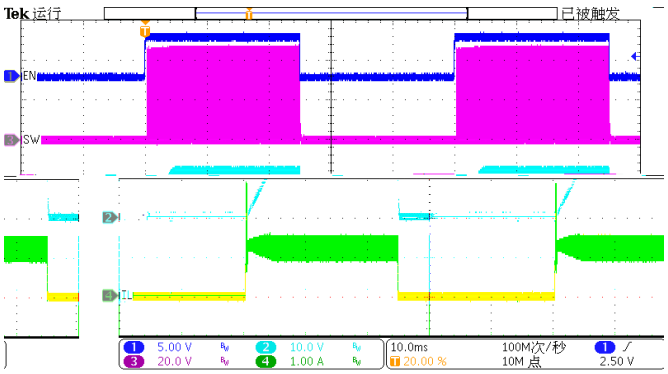
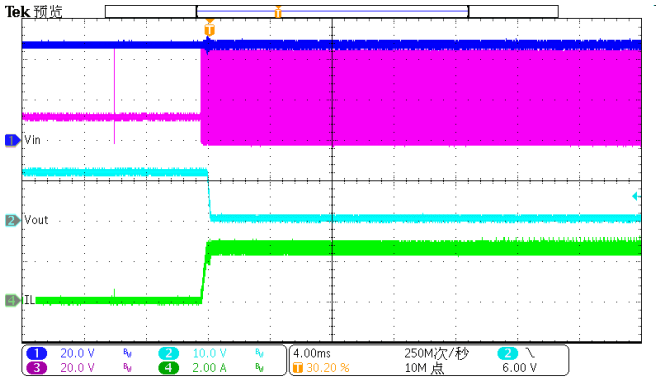
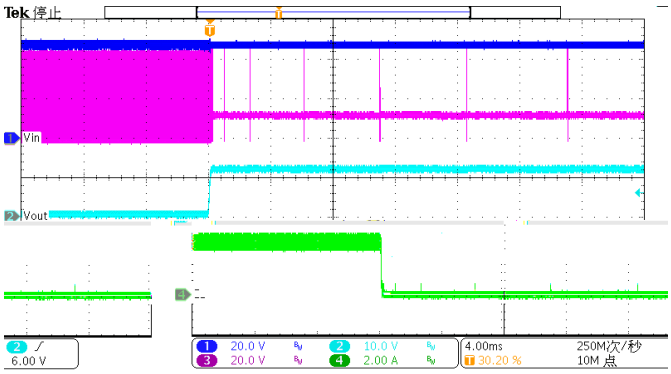
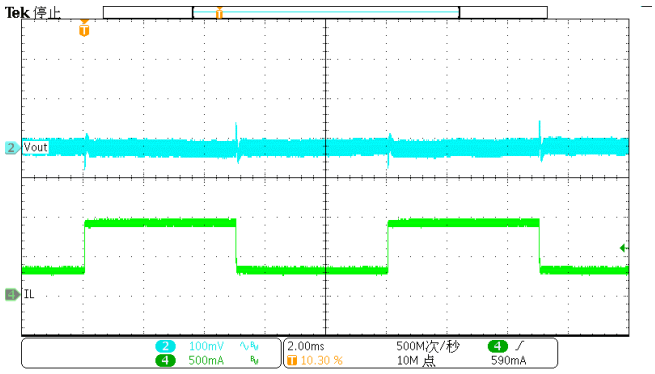

Tek 停止
Vin
Vout
20.0 V
10.0 V
20.0 V
1.00 A
4.00ms
30.20 %
250M次/秒
10M 点
24.0 V

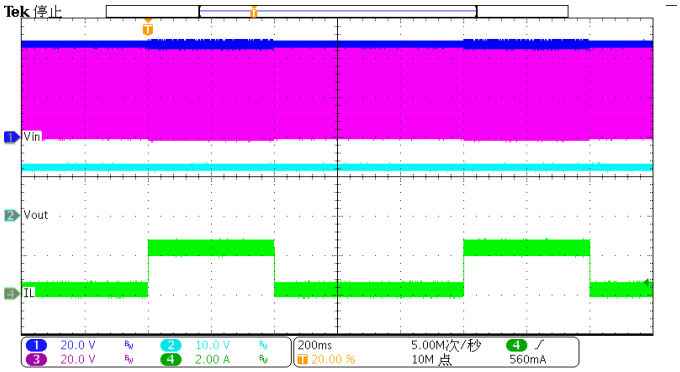

Tek 停止
Vin
Vout
IL
20.0 V
1.00 A
30.20 %

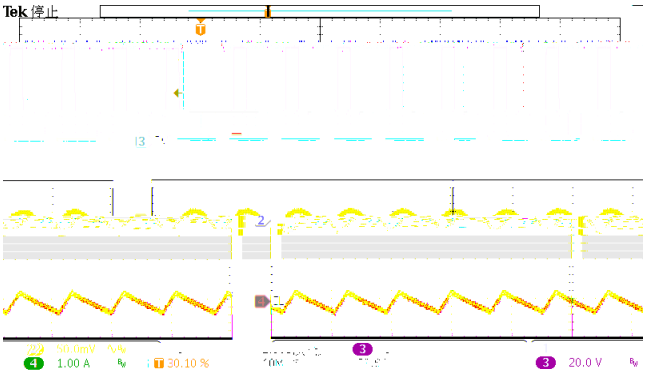

Tek 运行
已被触发
EN
SW
IL
5.00 V
20.0 V
10.0 V
1.00 A
10.0ms
20.00 %
100M次/秒
10M 点
2.50 V

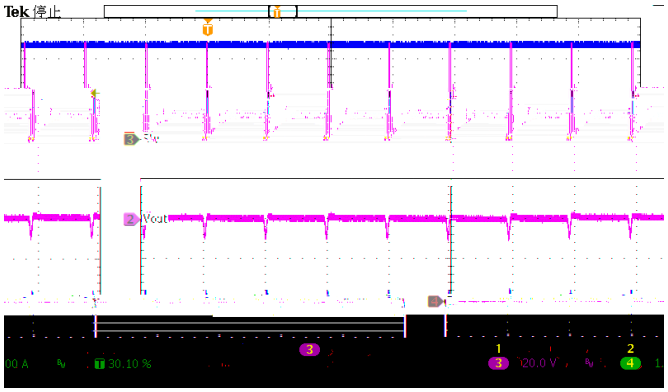

Tek 预览
Vin
Vout
IL
20.0 V
20.0 V
10.0 V
2.00 A
4.00ms
30.20 %
250M次/秒
10M 点
6.00 V

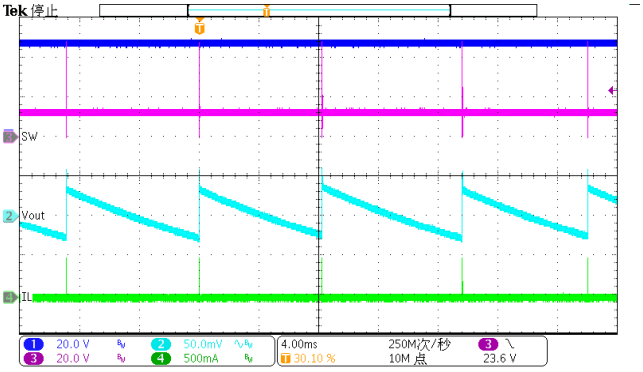

Tek 停止
Vin
Vout
6.00 V
20.0 V
20.0 V
10.0 V
2.00 A
4.00ms
30.20 %
250M次/秒
10M 点

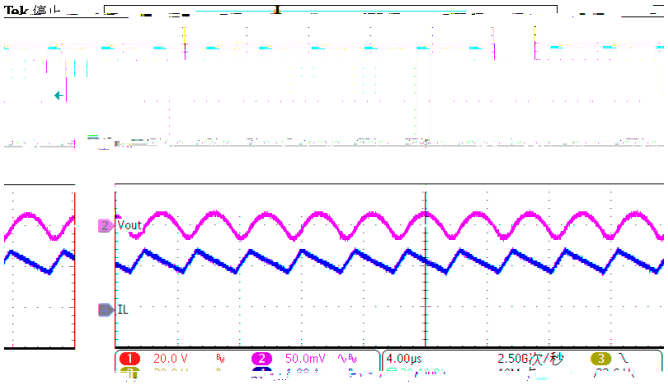

Tek 停止
Vout
IL
100mV
500mA
2.00ms
10.30 %
500M次/秒
10M 点
590mA

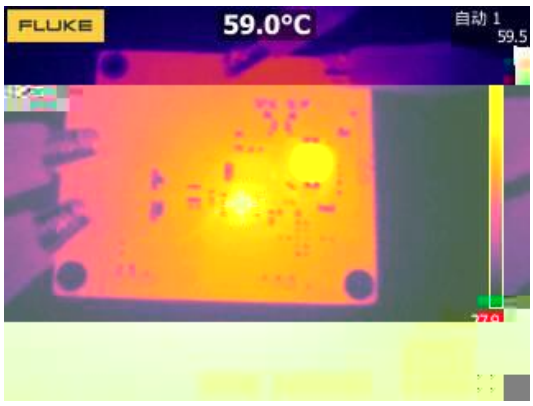

Tek 停止
Vin
Vout
IL
20.0 V
10.0 V
200ms
5.00M次/秒
20.00 %
10M 点
20.0 V
2.00 A
560mA

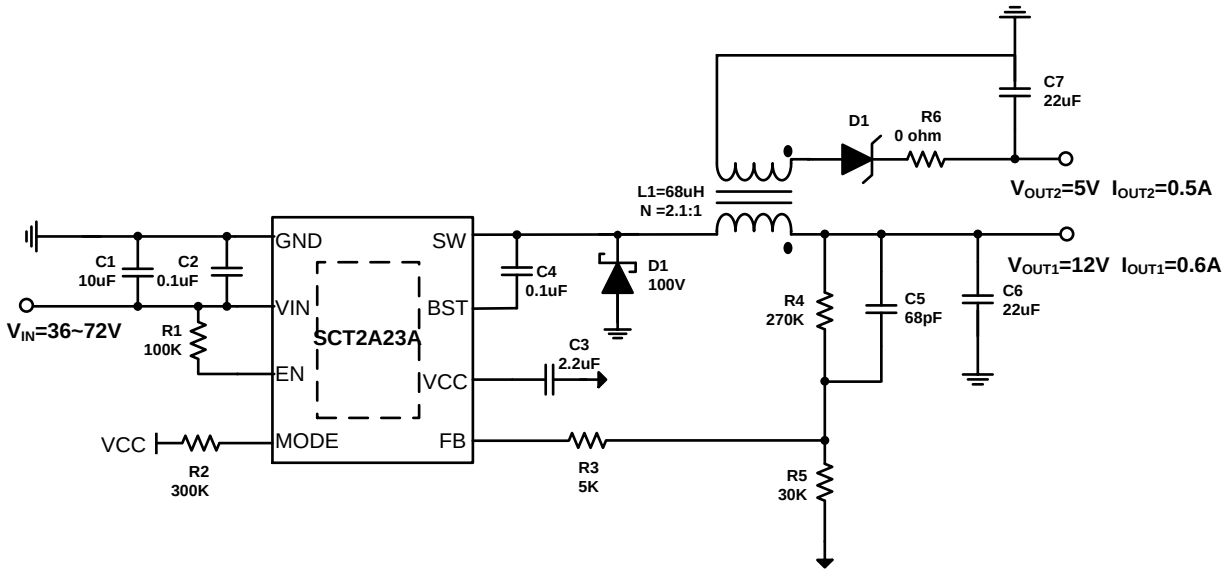

Tek 停止
1.00 A
30.10 %
20.0 V


Tek 停止
SW
Vout
IL
30.10 %
20.0 V


Tek 停止
SW
Vout
IL
20.0 V
50.0mV
4.00ms
250M次/秒
30.10 %
10M 点
23.6 V
500mA

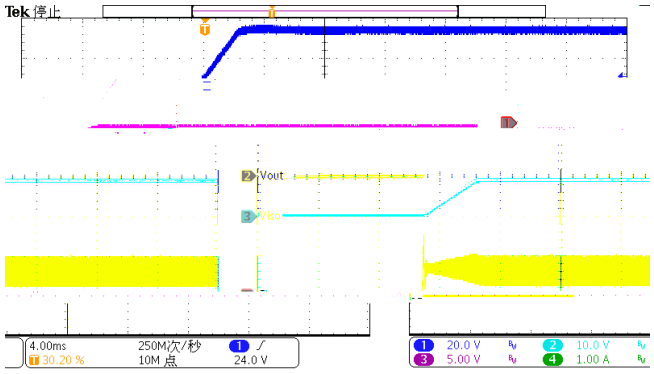

Vout
IL
20.0 V
50.0mV
4.00µs
2.506次/秒

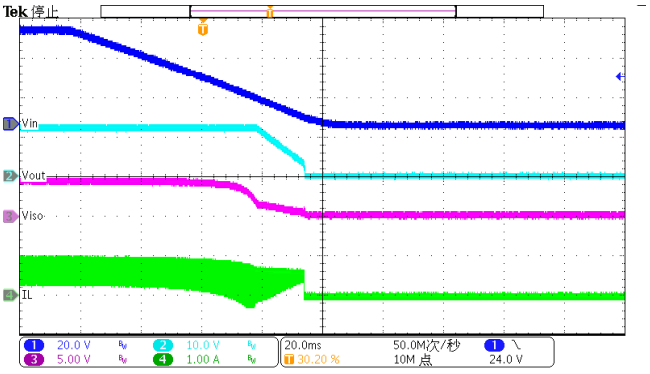

FLUKE
59.0°C
自动 1
59.5

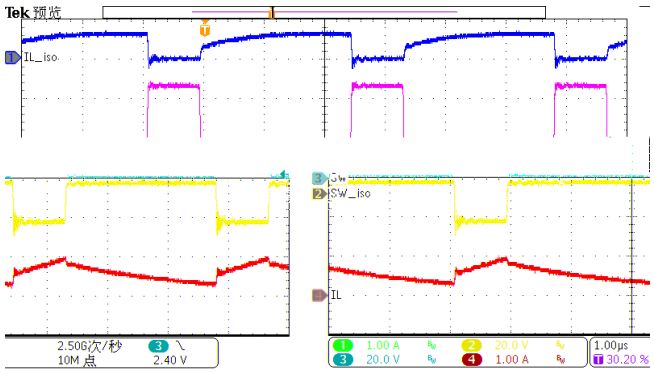

C7
22uF
D1
R6
0 ohm
L1=68uH
N =2.1:1
VOUT2=5V IOUT2=0.5A
C1
10uF
C2
0.1uF
GND
SW
C4
0.1uF
D1
100V
VOUT1=12V IOUT1=0.6A
VIN=36~72V
R1
100K
VIN
BST
SCT2A23A
R4
270K
C5
68pF
C6
22uF
EN
C3
2.2uF
VCC
VCC
MODE
FB
R2
300K
R3
5K
R5
30K

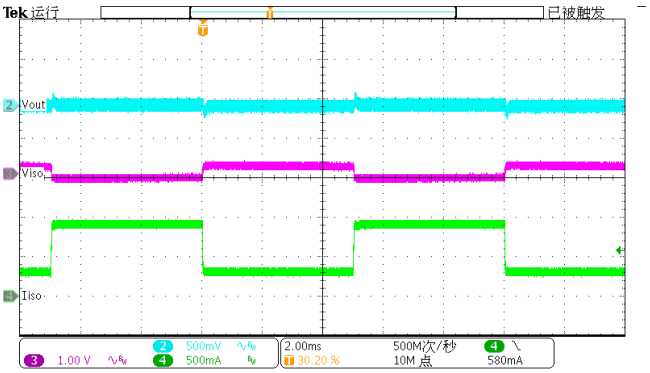
The primary output voltage in a Iso-Buck converter should be no more than one half of the minimum input voltage. For example, at the minimum V_{IN} of 36 V, the primary output voltage (V_{OUT1}) should be no higher than 18V. The isolated output voltage VOUT2 is set by selecting a transformer with a turns ratio ($N_1:N_2 = N_{PRI}:N$

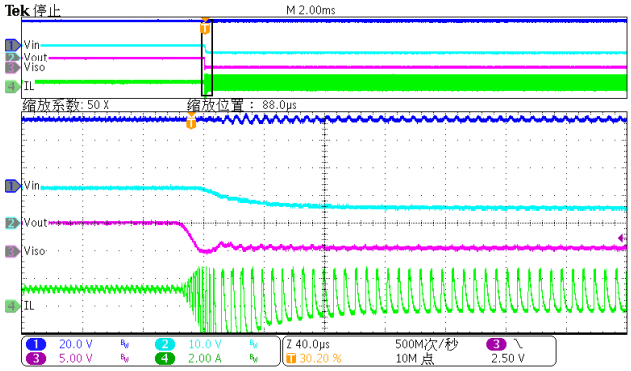
output voltOEM

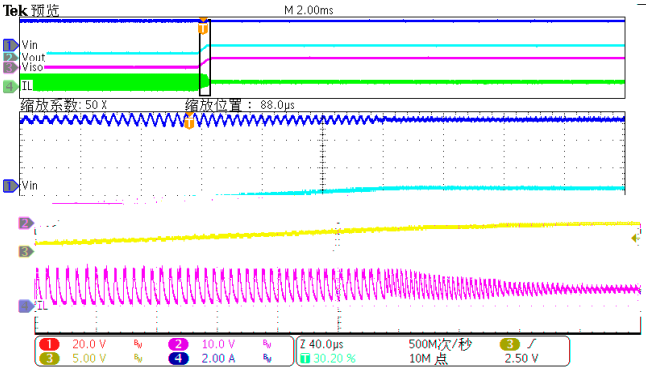

Tek 停止
Vout
Viso
4.00ms 250M次/秒 1
30.20 % 10M 点 24.0 V
1 20.0 V 2 10.0 V
3 5.00 V 4 1.00 A


Tek 停止
Vin
Vout
Viso
IL
1 20.0 V 2 10.0 V
3 5.00 V 4 1.00 A
20.0ms 50.0M次/秒 1
30.20 % 10M 点 24.0 V


Tek 预览
IL_iso
SW
SW_iso
IL
2.50G次/秒 3
10M 点 2.40 V
1 1.00 A 2 20.0 V
3 20.0 V 4 1.00 A
1.00µs
30.20 %


Tek 运行
已被触发
Vout
Viso
Iiso
2 500mV
3 1.00 V 4 500mA
2.00ms 500M次/秒 4
30.20 % 10M 点 580mA


Tek 停止
M 2.00ms
Vin
Vout
Viso
IL
缩放系数: 50 X
缩放位置： 88.0µs
1 20.0 V 2 10.0 V
3 5.00 V 4 2.00 A
Z 40.0µs 500M次/秒 3
30.20 % 10M 点 2.50 V


Tek 预览
M 2.00ms
Vin
Vout
Viso
IL
缩放系数: 50 X
缩放位置： 88.0µs
1 20.0 V 2 10.0 V
3 5.00 V 4 2.00 A
Z 40.0µs 500M次/秒 3
30.20 % 10M 点 2.50 V

1.

2.

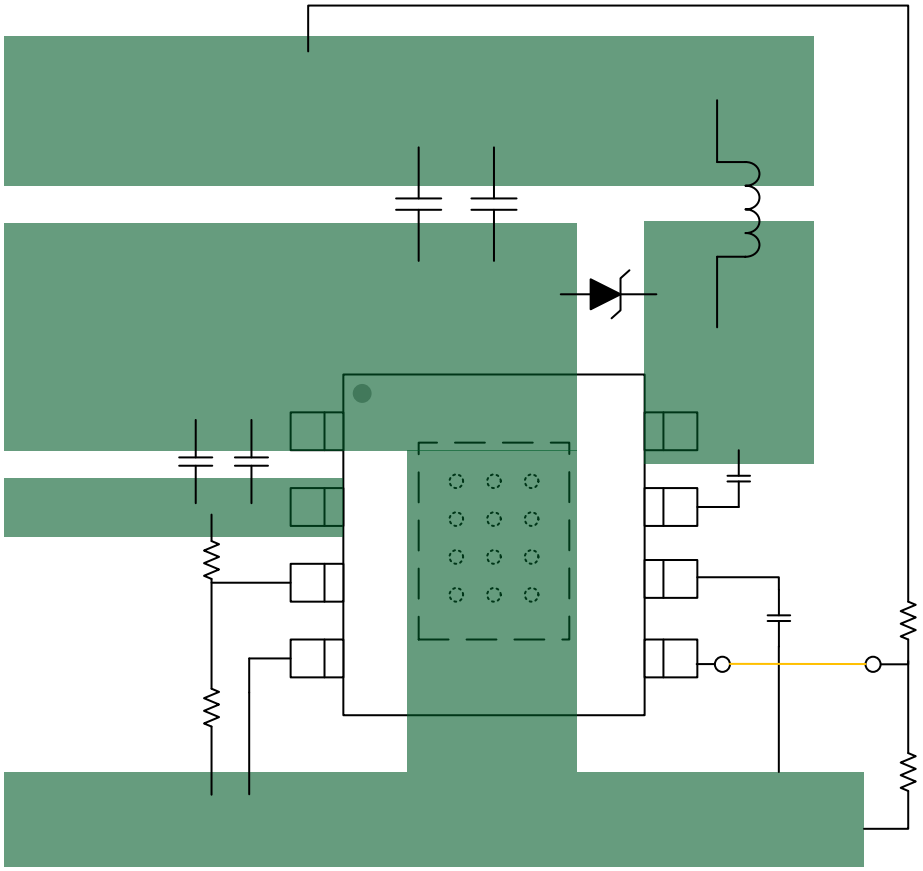
3.

4.

5.

6.

7.



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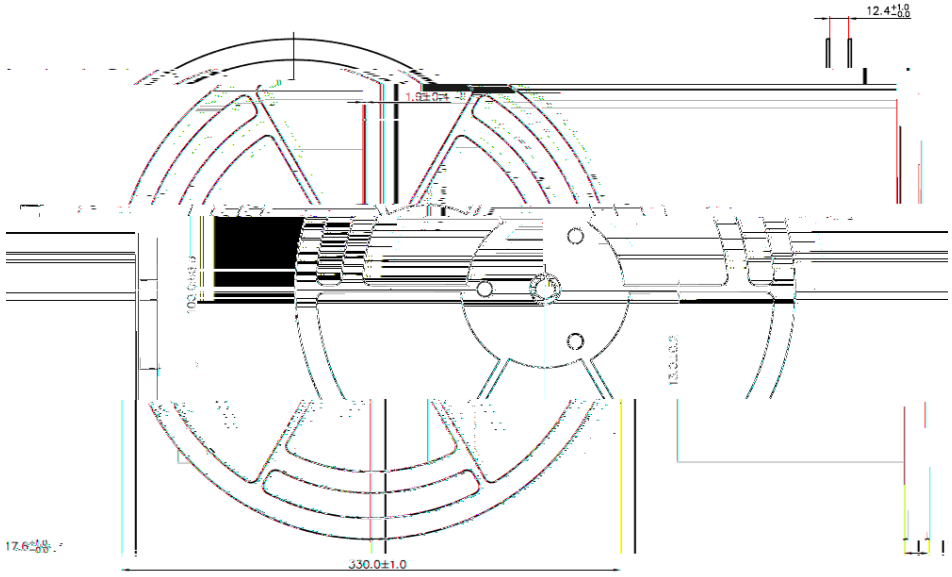
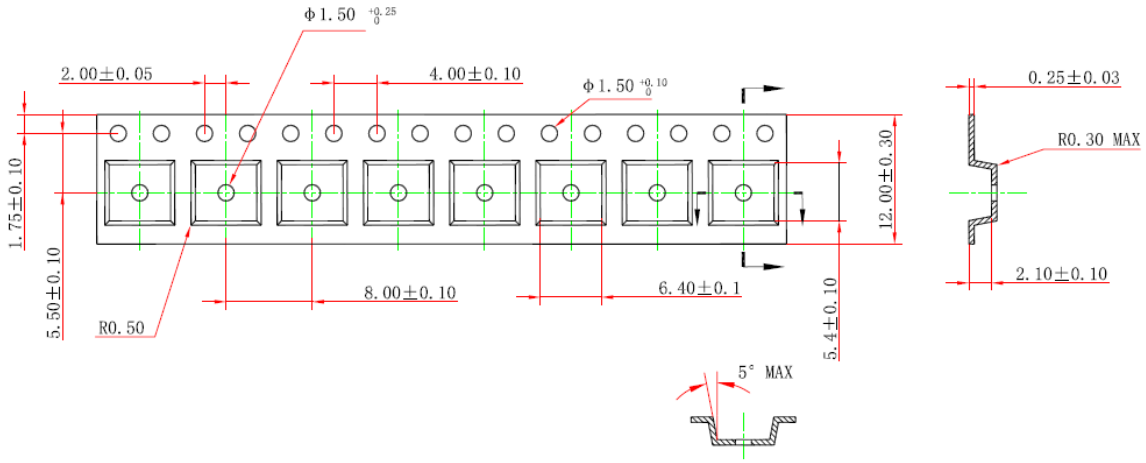

330.0±1.0


Φ1.50 +0.25 0
2.00±0.05
4.00±0.10
Φ1.50 +0.10 0
1.75±0.10
5.50±0.10
R0.50
8.00±0.10
6.40±0.1
12.00±0.30
5.4±0.10
5° MAX
0.25±0.03
R0.30 MAX
2.10±0.10