REVISION HISTORY

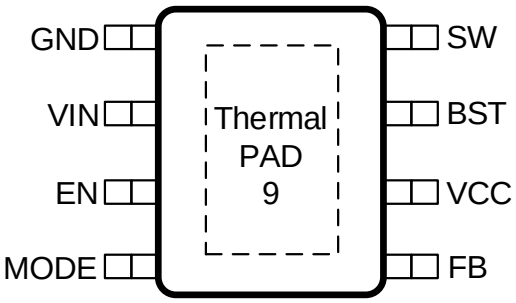
DEVICE ORDER INFORMATION

ABSOLUTE MAXIMUM RATINGS

(1)

(2)

PIN CONFIGURATION



PIN FUNCTIONS

		a) b) c)
		a) Connect the pin to VCC by a resistor will force the device in Forced Pulse Width Modulation (FPWM mode). b) c)

		X O SX SX YP RO SX O XKV MYW K K Y RO K YPOb O XKVPCONLKM O S Y NSSNO PYW RO Y Y 1 8. O RO Y YVK O RONO SMO O YK O , YVK O Y RO SX O XKV OPO OXMO KVO YP c SMKV

RECOMMENDED OPERATING CONDITIONS

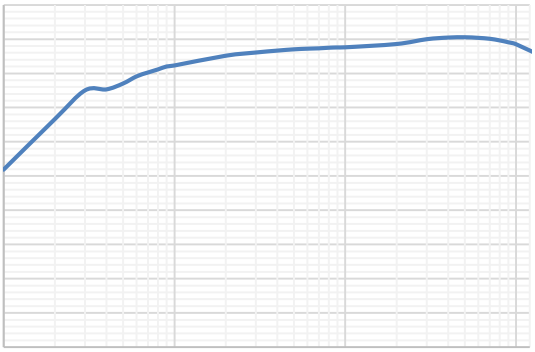
ESD RATINGS

(1)
(2)

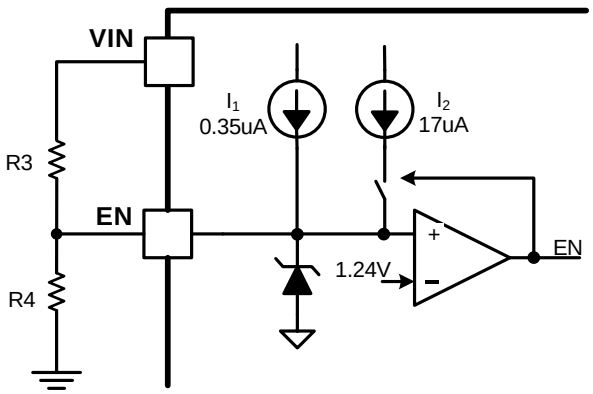
THERMAL INFORMATION

(1)

TYPICAL CHARACTERISTICS



OPERATION



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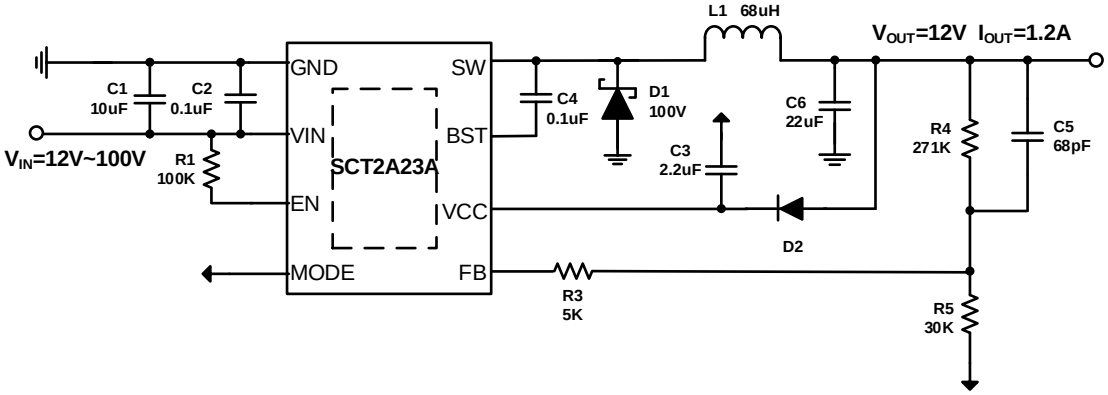
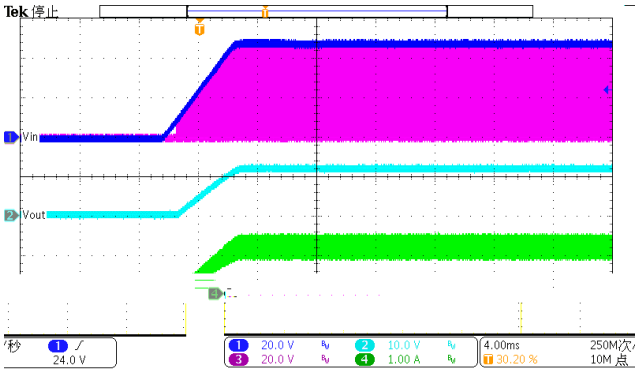
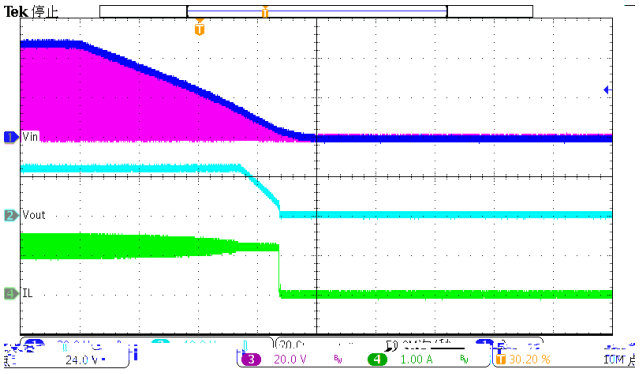
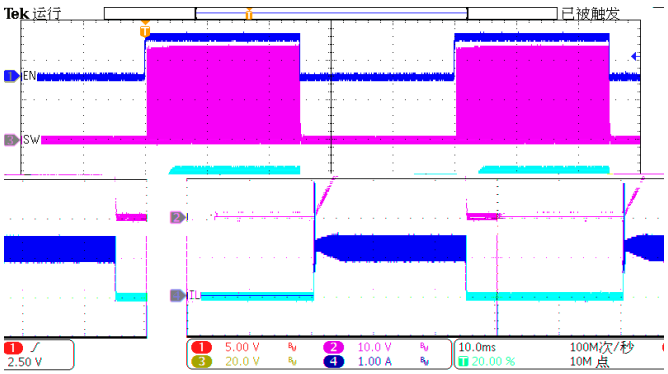
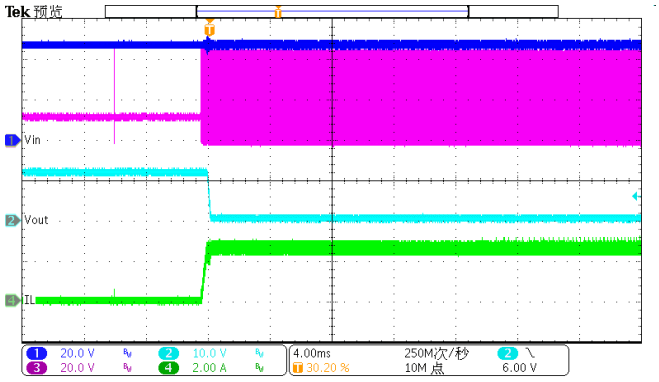

L1 68uH
V_{OUT}=12V I_{OUT}=1.2A
C1
10uF
C2
0.1uF
GND
SW
C4
0.1uF
D1
100V
C6
22uF
R4
271K
C5
68pF
V_{IN}=12V~100V
R1
100K
VIN
SCT2A23A
BST
C3
2.2uF
EN
VCC
D2
MODE
FB
R3
5K
R5
30K

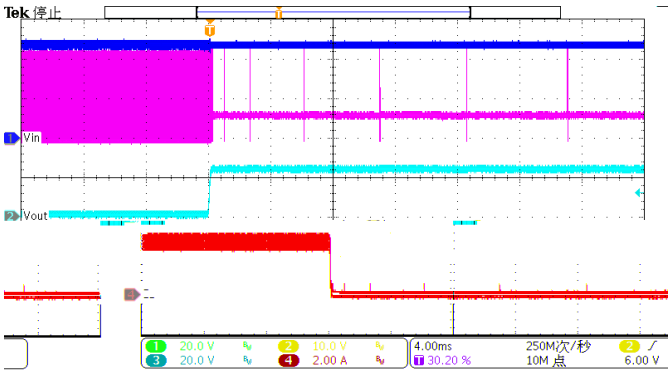
U					
U					
U					
U					

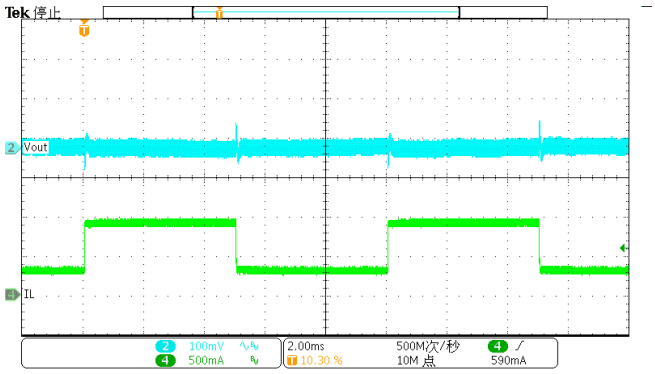

Tek 停止
Vin
Vout
24.0 V
20.0 V
20.0 V
10.0 V
1.00 A
4.00ms
30.20 %
250M次/
10M 点

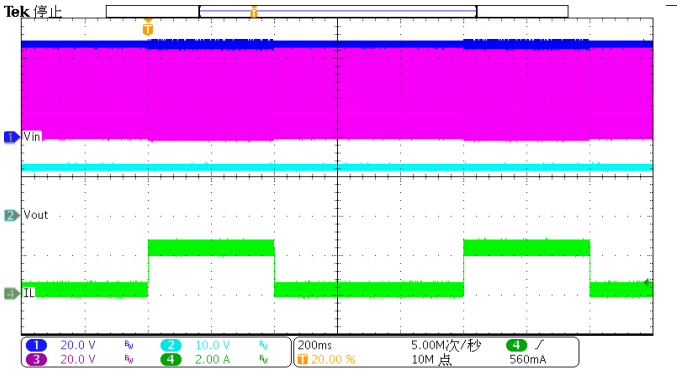

Tek 停止
Vin
Vout
IL
24.0 V
20.0 V
1.00 A
30.20 %

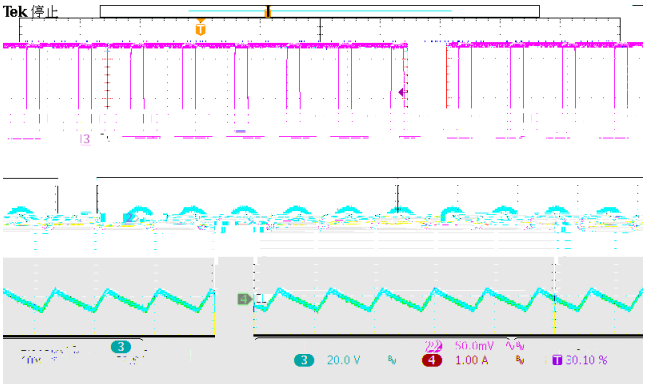

Tek 运行
已被触发
EN
SW
IL
2.50 V
5.00 V
20.0 V
10.0 V
1.00 A
10.0ms
20.00 %
100M次/秒
10M 点

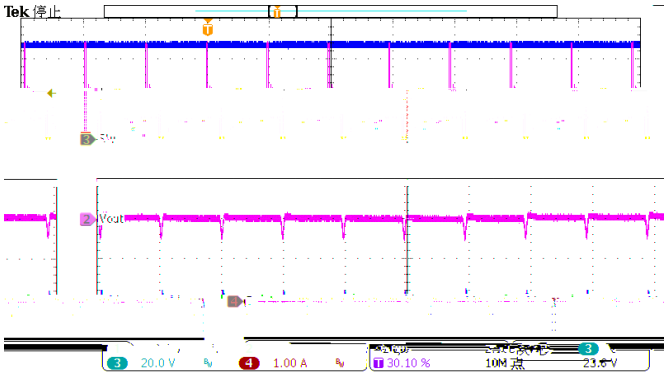

Tek 预览
Vin
Vout
IL
20.0 V
20.0 V
10.0 V
2.00 A
4.00ms
30.20 %
250M次/秒
10M 点
6.00 V

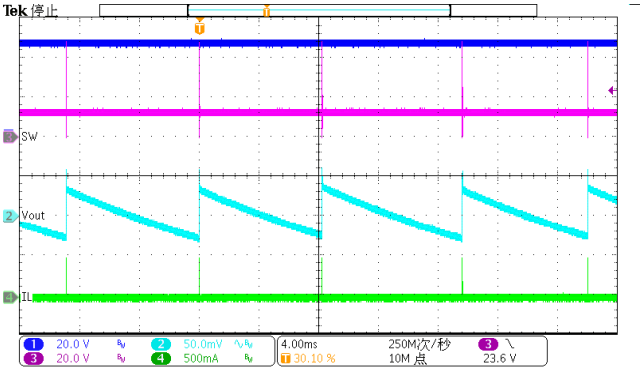

Tek 停止
Vin
Vout
20.0 V
20.0 V
10.0 V
2.00 A
4.00ms
30.20 %
250M次/秒
10M 点
6.00 V

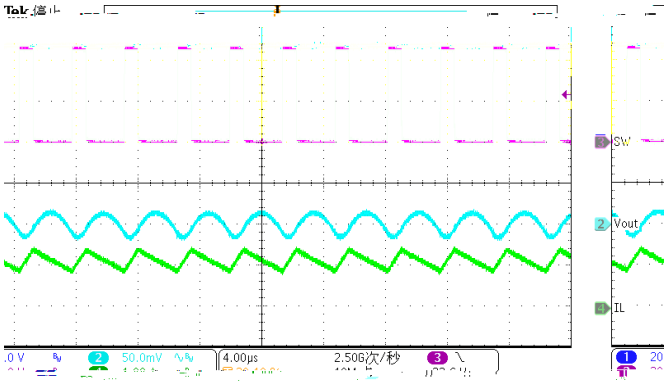

Tek 停止
Vout
IL
100mV
500mA
2.00ms
10.30 %
500M次/秒
10M 点
590mA

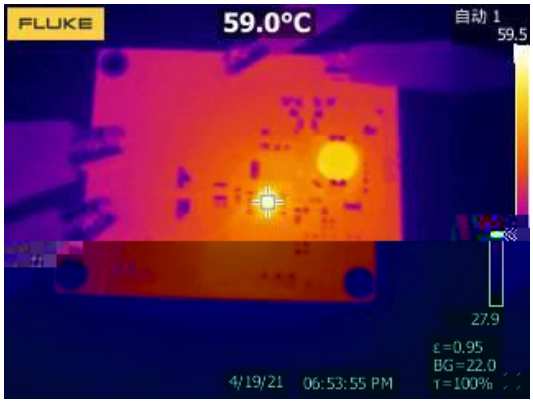

Tek 停止
Vin
Vout
IL
20.0 V
10.0 V
200ms
5.00M次/秒
20.00 %
10M 点
20.0 V
2.00 A
560mA

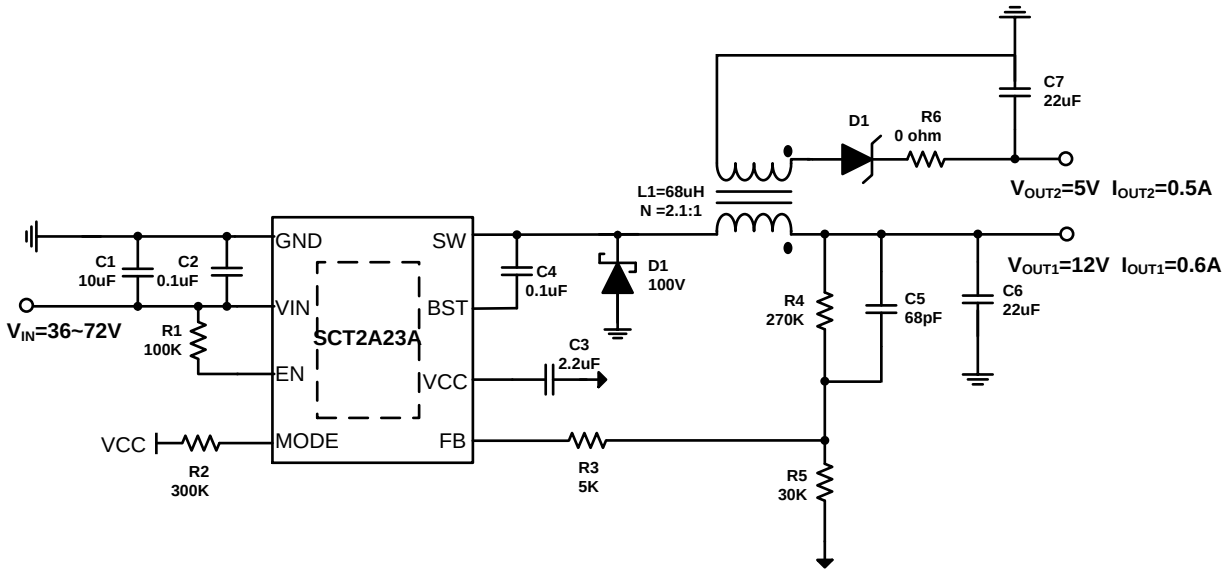

Tek 停止
20.0 V
50.0mV
1.00 A
30.10 %


Tek 停止
SW
Vout
20.0 V
1.00 A
30.10 %
10M 点
23.6 V


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


SW
Vout
IL
50.0mV
4.00µs
2.50G次/秒


FLUKE
59.0°C
自动 1
59.5
27.9
ε=0.95
BG=22.0
τ=100%
4/19/21
06:53:55 PM

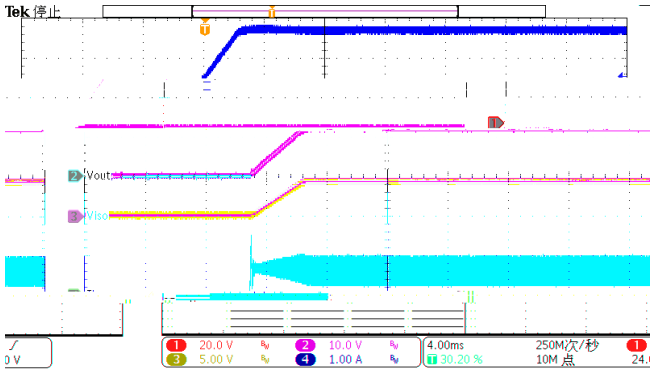

C7
22uF
D1
R6
0 ohm
L1=68uH
N =2.1:1
VOUT2=5V IOUT2=0.5A
C1
10uF
C2
0.1uF
GND
SW
C4
0.1uF
D1
100V
VOUT1=12V IOUT1=0.6A
VIN=36~72V
R1
100K
VIN
BST
SCT2A23A
R4
270K
C5
68pF
C6
22uF
EN
VCC
C3
2.2uF
VCC
MODE
FB
R2
300K
R3
5K
R5
30K

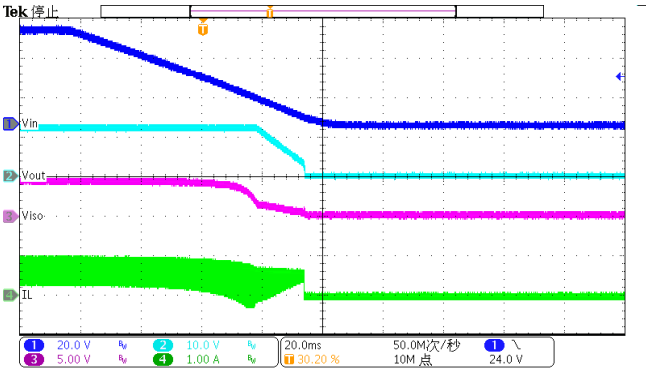
The primary output voltage in a Iso-Buck converter should be no more than one half of the minimum input voltage. For example, at the minimum V_{IN} of 36 V, the primary output voltage (V_{OUT1}) should be no higher than 18V. The isolated output voltage VOUT2 is set by selecting a transformer with a turns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

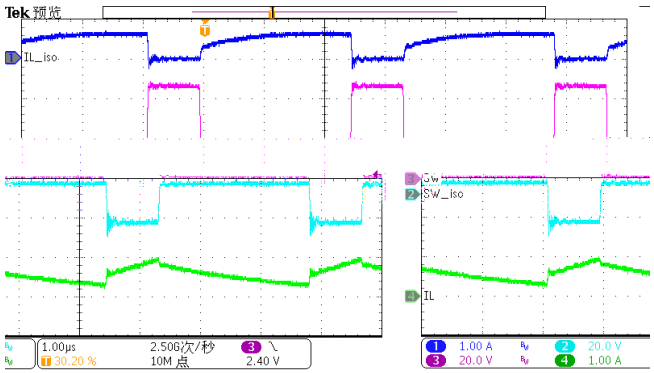
The 0.7 V (Vd1) represents the forward voltage drop of the secondary rectifier diode. By setting the primary output voltage V_{OUT1} by selecting the correct feedback resistors, the secondary voltage is regulated at V_{OUT2} nominally. Adjustment of the primary side V_{OUT1} may be required to compensate for voltage errors due to the leakage inductance of the transformer, the resistance of the transformer windings, the diode drop in the power path on the secondary side.

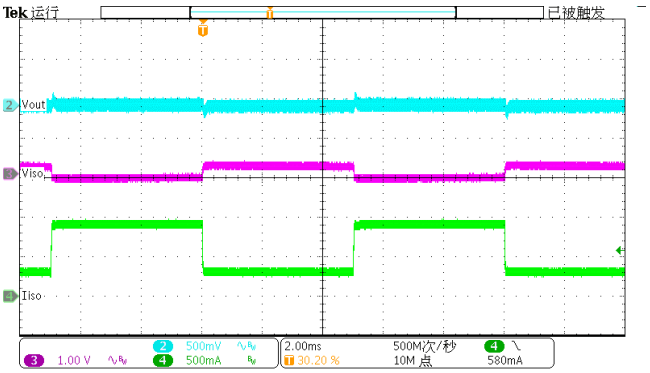
The secondary side rectifier diode must block the maximum input voltage reflected at secondary side switch node. The minimum diode reverse voltage V_{RD1} rating is given below

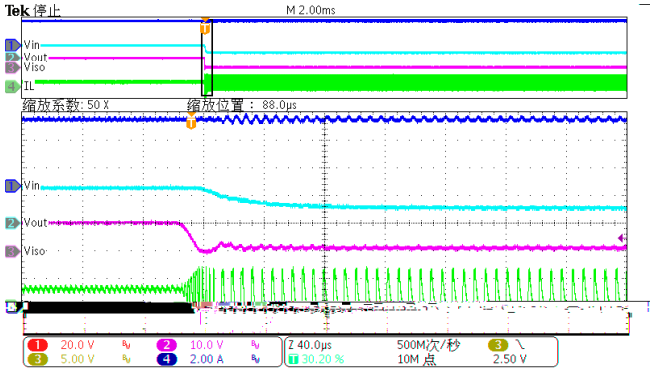
A diode with higher reverse voltage rating must be selected in this application. If the input voltage (V_{IN}) has transients above the normal operating maximum input voltage, then the worst-case transient input voltage must be used in calculation while selecting the secondary side rectifier diode.

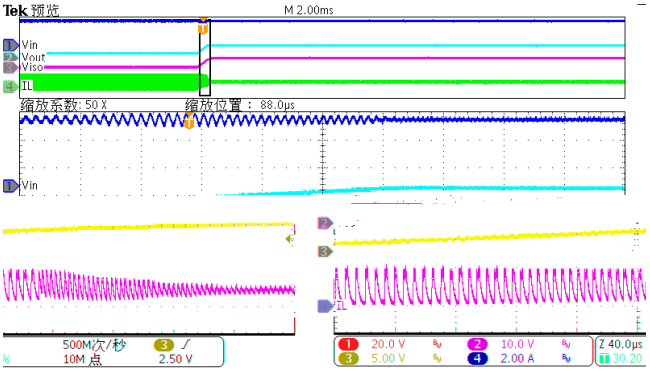

Tek 停止
Vout
Viso
20.0 V
10.0 V
4.00ms
250M次/秒
5.00 V
1.00 A
30.20 %
10M 点


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


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


Tek 运行
已被触发
Vout
Viso
Iso
500mV
500mA
2.00ms
500M次/秒
1.00 V
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
20.0 V
10.0 V
Z 40.0µs
500M次/秒
5.00 V
2.00 A
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
500M次/秒
10M 点
2.50 V
20.0 V
10.0 V
5.00 V
2.00 A
Z 40.0µs

1.

2.

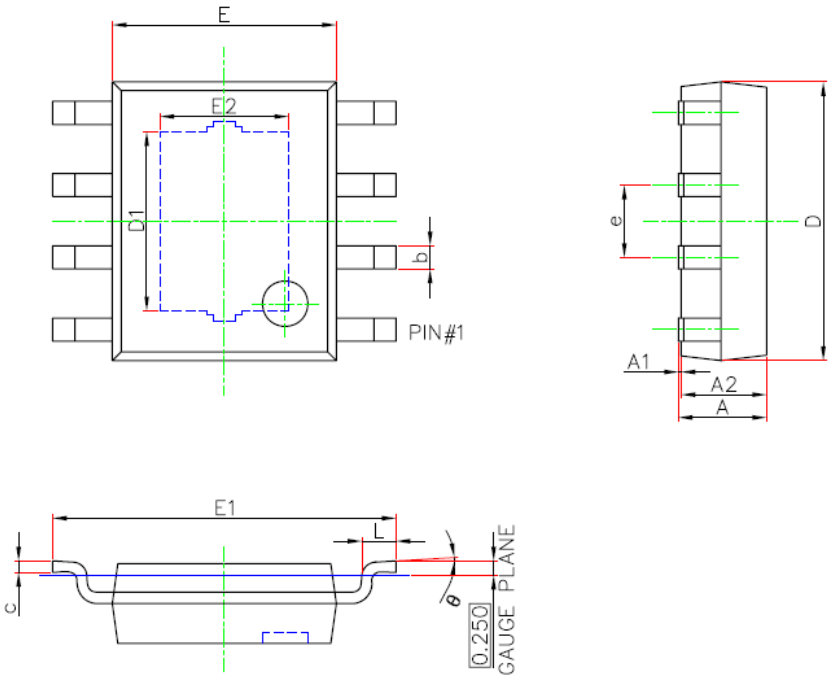
3.

4. RO LY YW WKcO S K WK O Y XN WKXO MYXXOMON Y RO Y XN WKXO YX Y WKcO Lc SK

YWO ON Y RO LYK N PY WOMRKXSWKV OX R KXN OWSKLSSc SK W VS YO RO WKV SK XNO XOK R RO RO WKV KN W Y O YWO SK RO WKV KN Y Y XN WK O YX , a SWMK O RSRO SK SK KXN Y O RYY LO SNO NYa X KNSK RO WKV OPY WKXMO S OMYWWOXNON WSWNSKWOO N SWRYYO YP RO WKV SK L K WKWO SK YPPO YO S YP YWO YV WO W XK WSWK SYX a RO O YWO YV WO W R RO SK S YPMYXMO X V SK Y OX SK MKXLO ON Y KMRSO OK O OK KLYO YMO

5.

PACKAGE INFORMATION



1.
2.
3.
4.
5.
6.