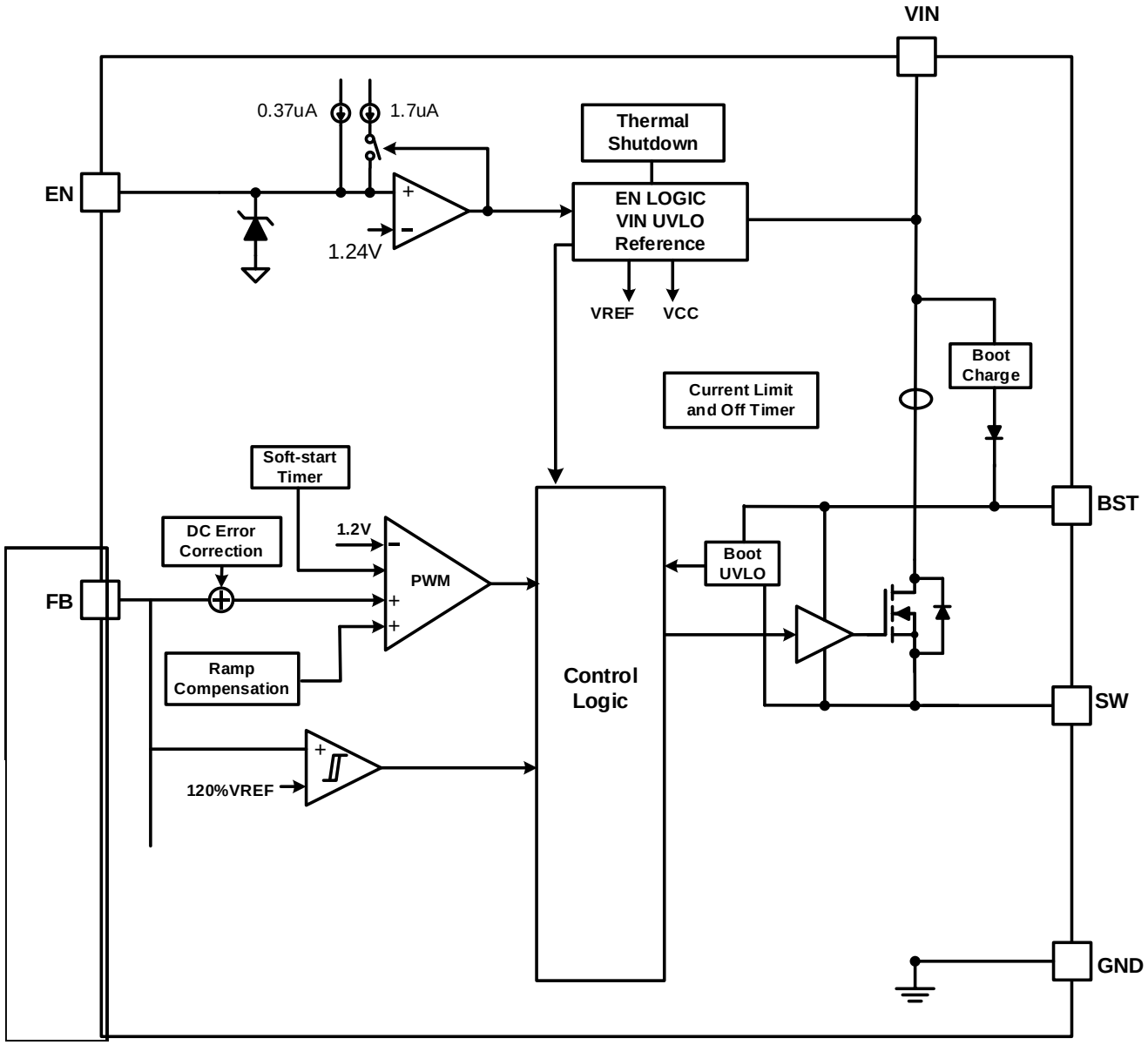
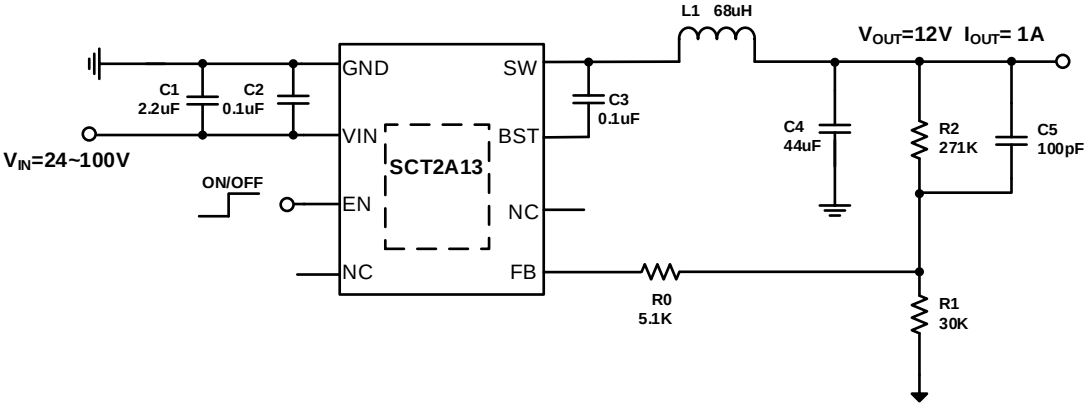
5.5V-100V Vin, 1A, Step-down DCDC Converter

-
-
-
-
-
-
-
-
-
-
-
-
-
-
-
-
-
-


VIN
0.37uA
1.7uA
Thermal Shutdown
EN
EN LOGIC
VIN UVLO
Reference
1.24V
VREF
VCC
Boot Charge
Current Limit and Off Timer
Soft-start Timer
BST
DC Error Correction
1.2V
PWM
Boot UVLO
FB
Ramp Compensation
Control Logic
SW
120%VREF
GND

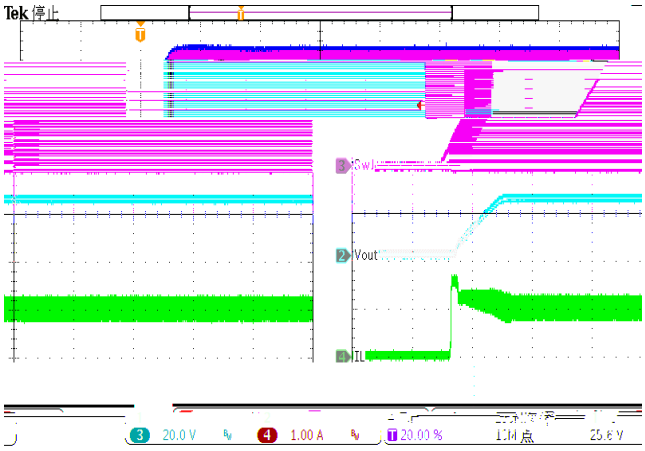

L1 68uH
VOUT=12V IOUT= 1A
GND
SW
C1
2.2uF
C2
0.1uF
C3
0.1uF
VIN
BST
VIN=24~100V
SCT2A13
C4
44uF
R2
271K
C5
100pF
ON/OFF
EN
NC
NC
FB
R0
5.1K
R1
30K

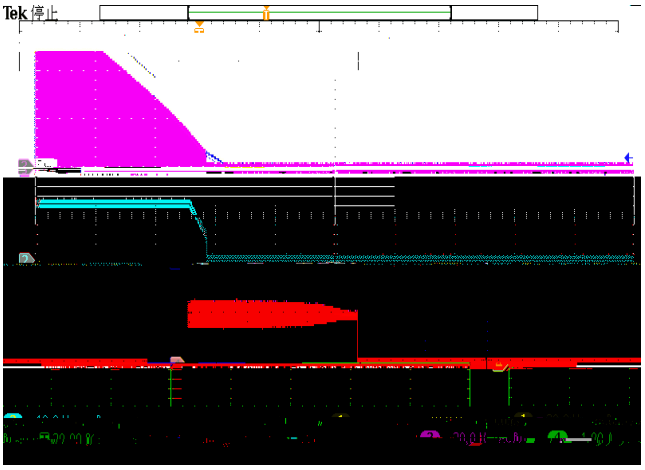
$_2$ = (

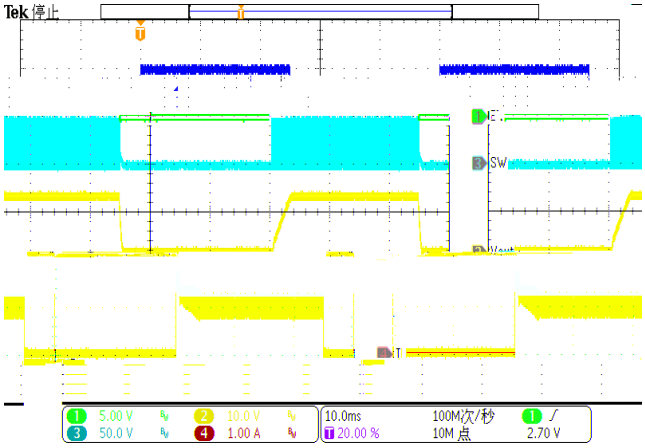
$$I_{CINRMS} = I_{OUT} \sqrt{\frac{V_{OUT}}{V_{IN}} \left(1 - \frac{V_{OUT}}{V_{IN}}\right)}$$

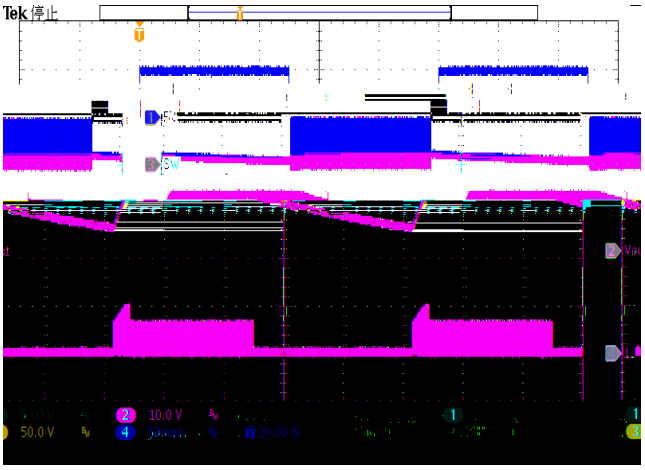
$$I_{CINRMS} = 0.5 \quad I_{OUT}$$

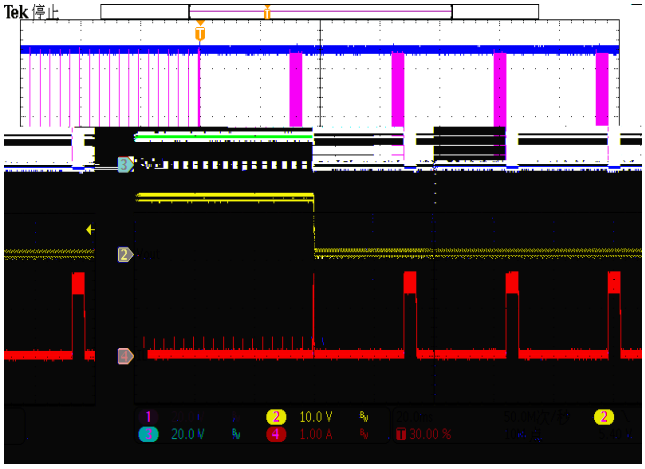
$$\Delta V_{IN} = \frac{I_{OUT}}{f_{SW} \quad C_{IN}} \quad \frac{V_{OUT}}{V_{IN}}$$

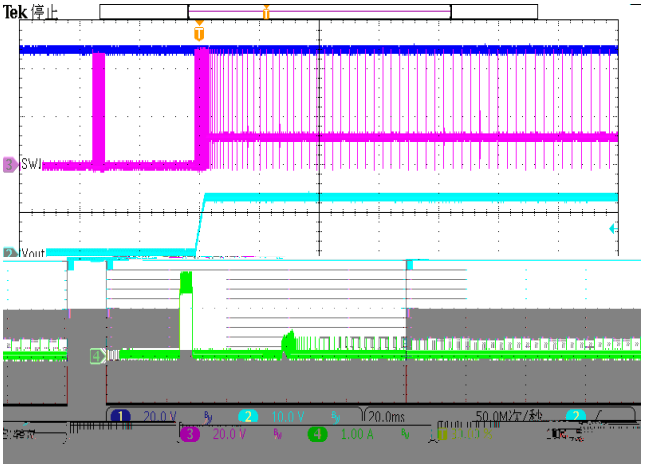

Tek 停止
SW
Vout
IL
3 20.0 V
4 1.00 A
20.00 %
10M 点
25.6 V

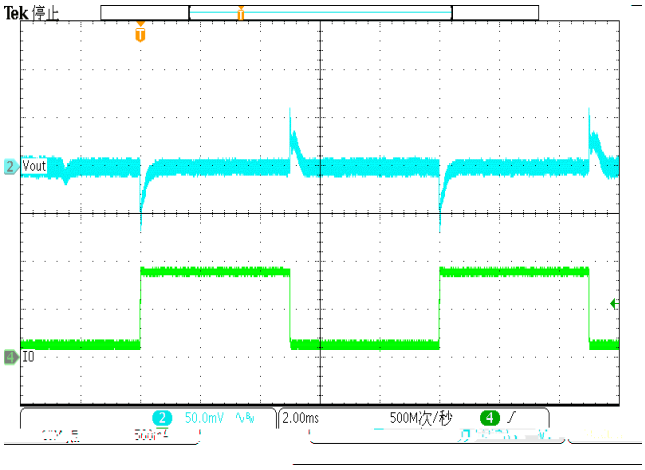

Tek 停止

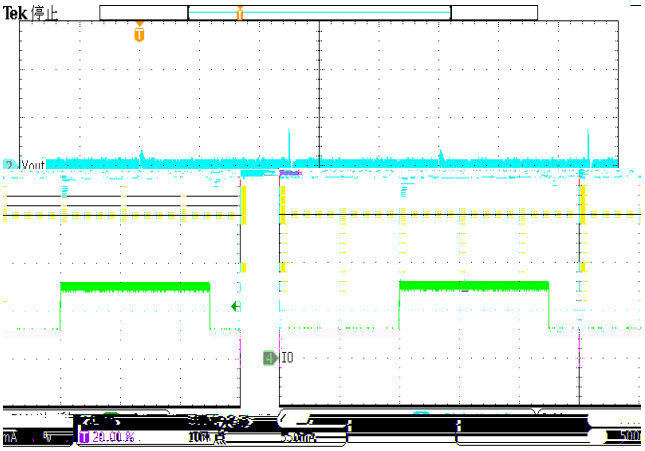

Tek 停止
SW
1 5.00 V
3 50.0 V
2 10.0 V
4 1.00 A
10.0ms
20.00 %
100M次/秒
10M 点
2.70 V

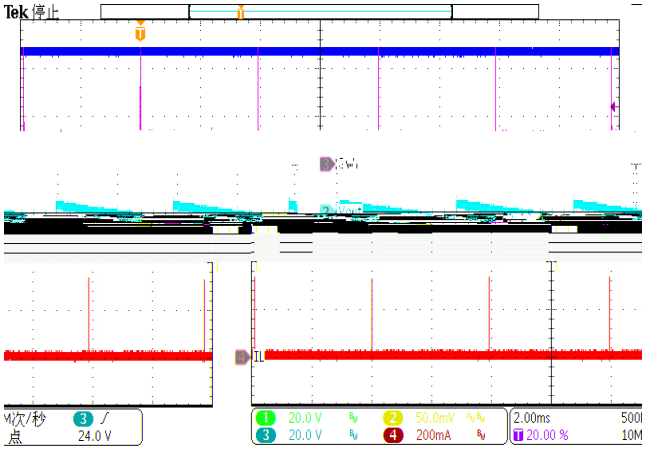

Tek 停止
SW
2 10.0 V
50.0 V
4 500mA
20.00 %

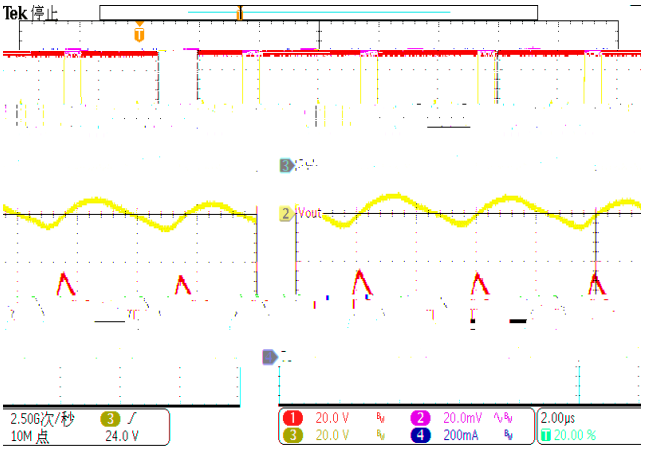

Tek 停止
2 10.0 V
3 20.0 V
4 1.00 A
30.00 %

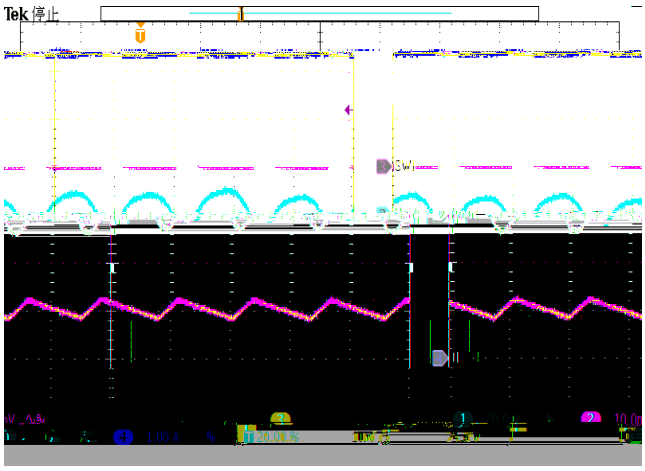

Tek 停止
SW
Vout
1 20.0 V
2 10.0 V
20.0ms
50.0M次/秒
3 20.0 V
4 1.00 A

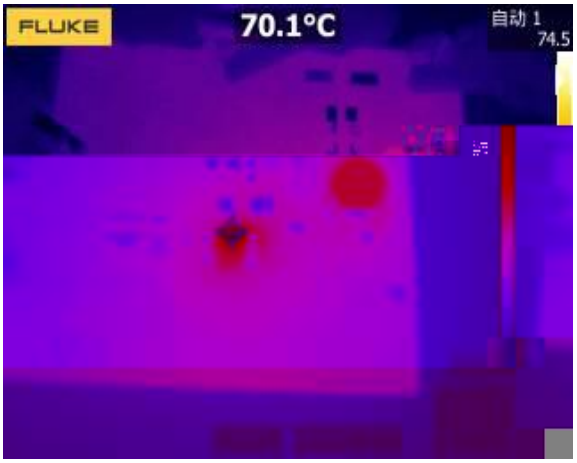

Tek 停止
Vout
IO
50.0mV
2.00ms
500M次/秒

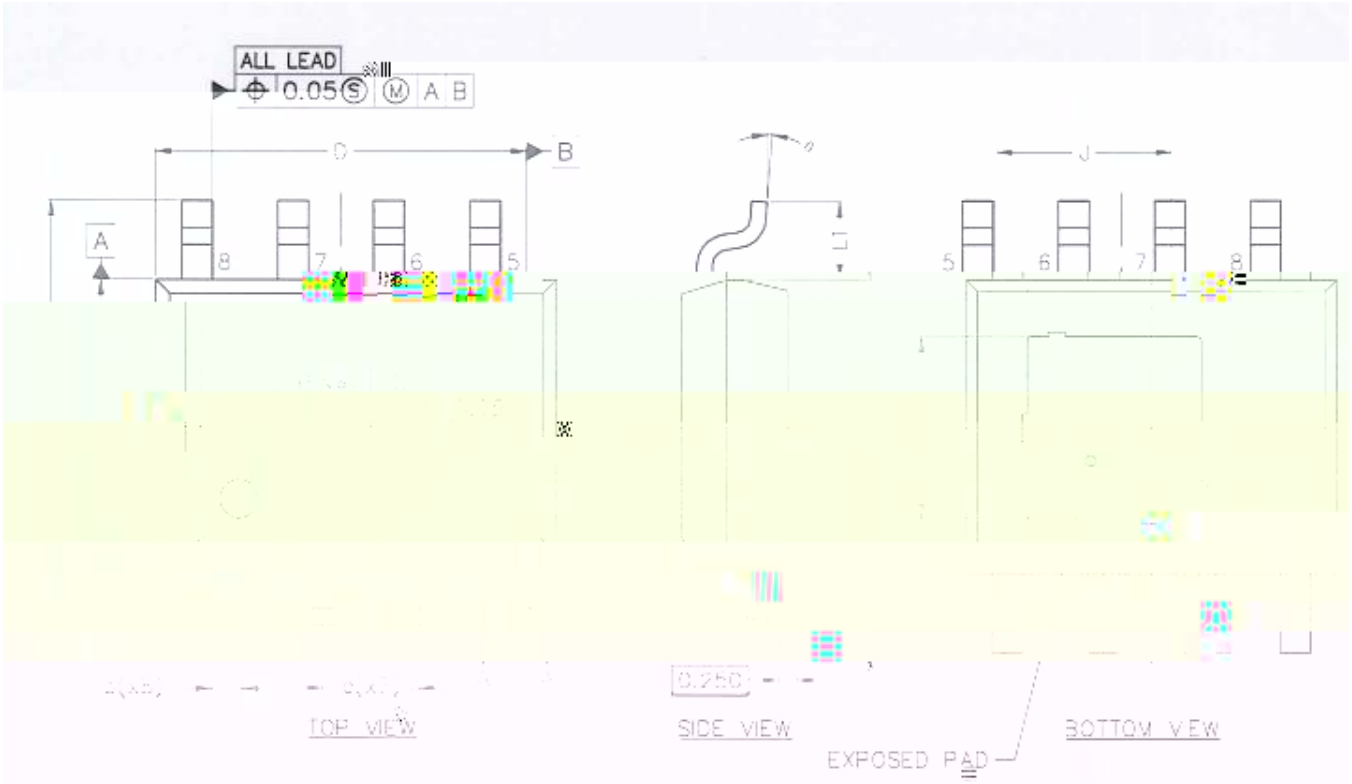

Tek 停止
Vout
IO

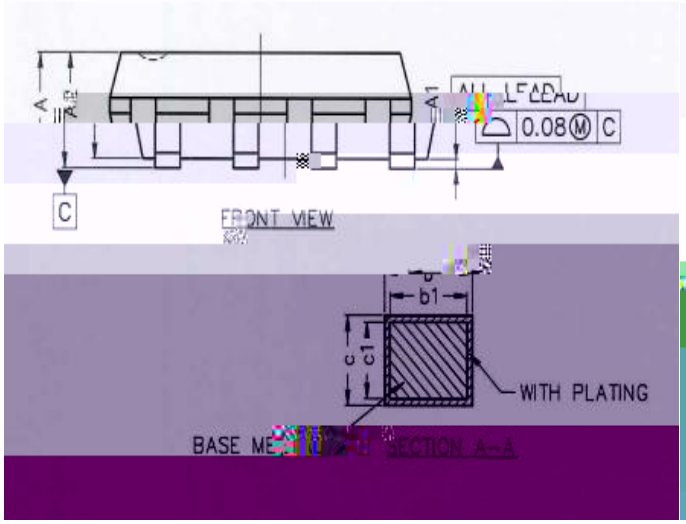

Tek 停止
IL
24.0 V
20.0 V
50.0mV
200mA
2.00ms
20.00 %


Tek 停止
Vout
2.50G次/秒
10M 点
24.0 V
20.0 V
20.0mV
200mA
2.00µs
20.00 %

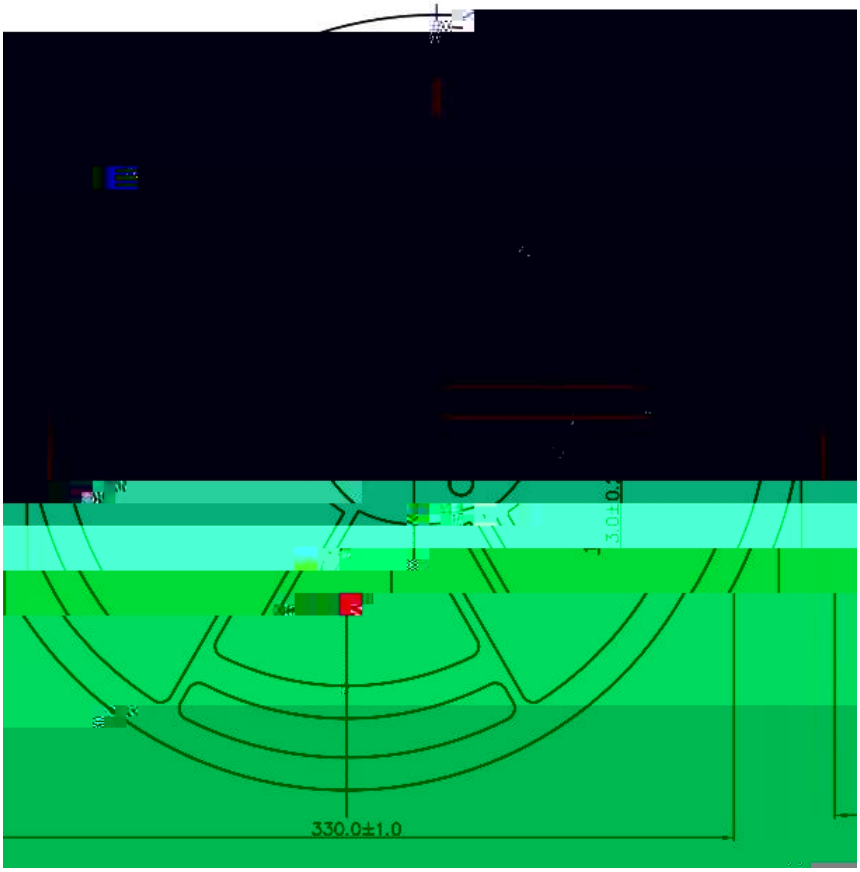

Tek 停止

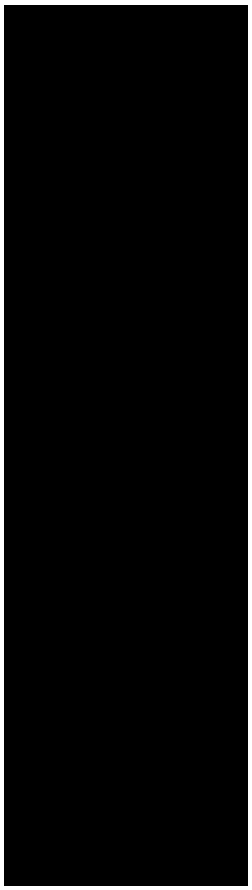
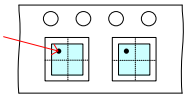

FLUKE
70.1°C
自动 1
74.5





		SYMBOL	MIN	NOM	MAX
TOTAL THICKNESS		A	–	–	1.75
STAND OFF		A1	0.05	0.125	0.20
MOLD TOTAL THICKNESS		A2	1.30	1.40	1.60
LEAD WIDTH		b	0.31	[illegible]	0.53
LEAD WIDTH		b1	0.30	0.40	0.50
LEAD THICKNESS		c	0.20	[illegible]	0.24
LEAD THICKNESS		c1	0.19	0.203	[illegible]
MOLD LENGTH		D	4.80	4.90	[illegible]
MOLD WIDTH		E1	3.80	3.90	4.00
LEAD SPAN		E	5.80	6.00	[illegible]
LEAD PITCH		e	1.27 BSC		
EXPOSED PAD SIZE	X	J	2.15	2.30	2.45
	Y	K	2.25	2.40	2.55
LEAD LENGTH		L1	1.05 REF		
LEAD SOLE LENGTH		L	0.40	0.60	0.80
LEAD FORM ANGLE		θ	0°	–	8°


330.0±1.0



φ1.50
2.00±0.05
φ1.50
0.25±0.03
±0.10
±0.30
R0.30 MAX