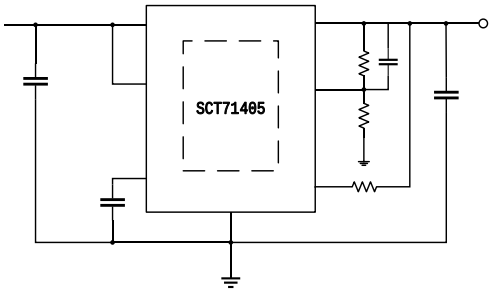
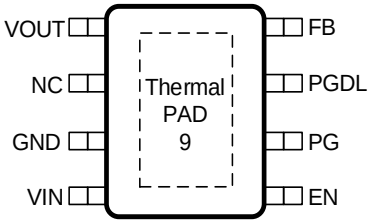
3V-40V Vin, 500mA, Ultra-Low Quiescent Current LDO with Power-Good

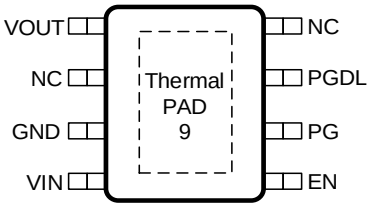


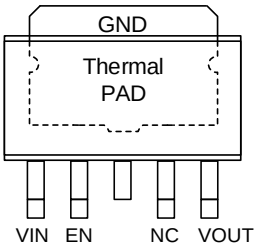
Release to production( ).
Update the ELECTRICAL CHARACTERISTICS.

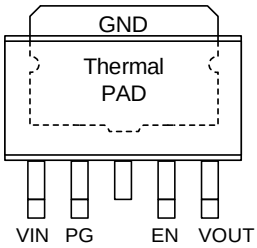
the line regulation, load regulation and the .

			5A00		
			F50B		
			F33B		
			5F50		
			5F33		
			F50A		


VOUT
NC
GND
VIN
Thermal
PAD
9
FB
PGDL
PG
EN


VOUT
NC
GND
VIN
Thermal
PAD
9
NC
PGDL
PG
EN


GND
Thermal
PAD
VIN
EN
NC
VOUT


GND
Thermal
PAD
VIN
PG
EN
VOUT

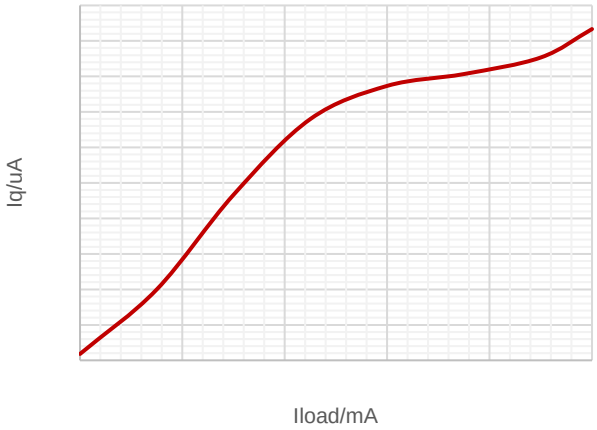
) R U1g56PE, îì '"k¿Yñ õŸ Âõ“p

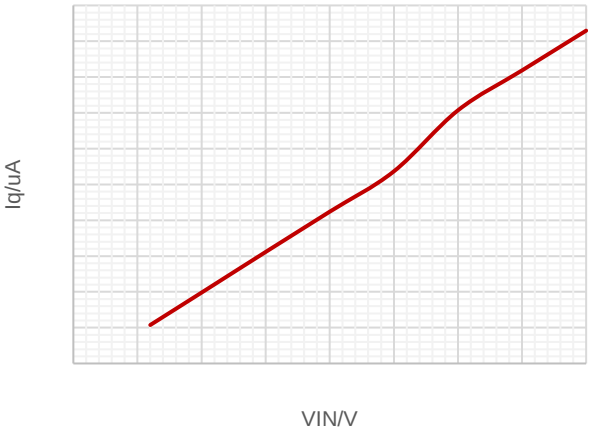
PARAMETER（4-layer）			UNIT

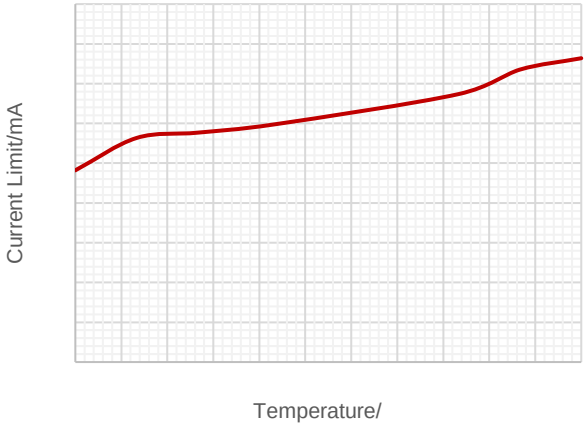
R_{JA}

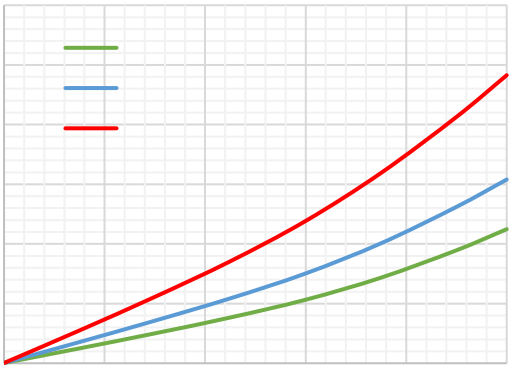
(1)

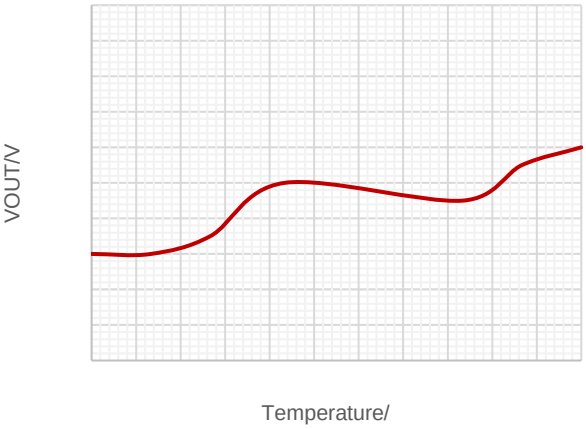
(2)

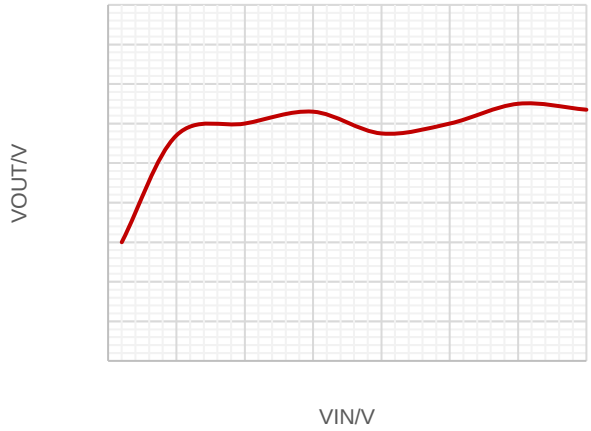

Iq/uA
Iload/mA

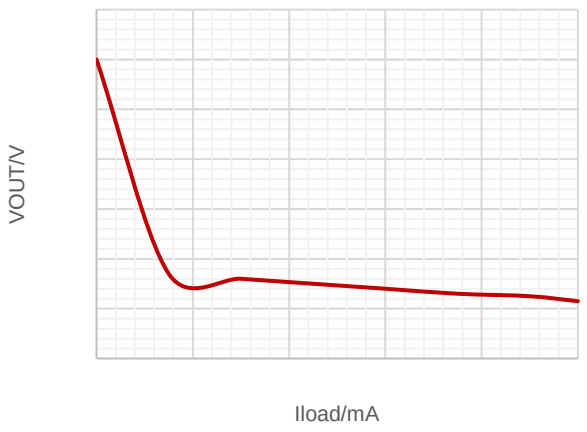

Iq/uA
VIN/V

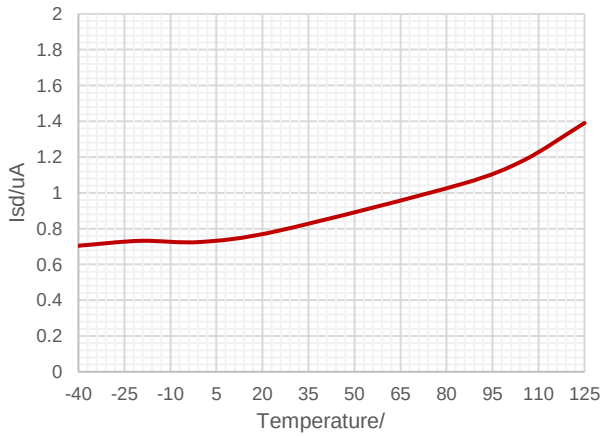

Current Limit/mA
Temperature/

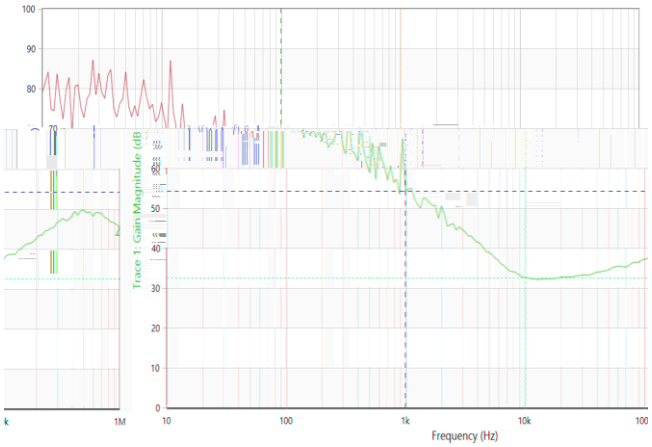


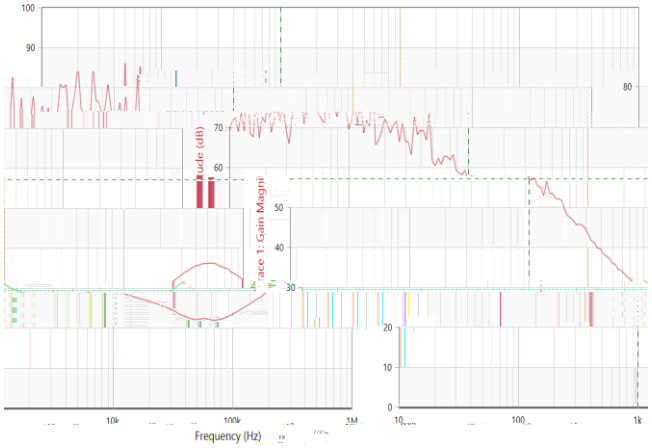

VOUT/V
Temperature/

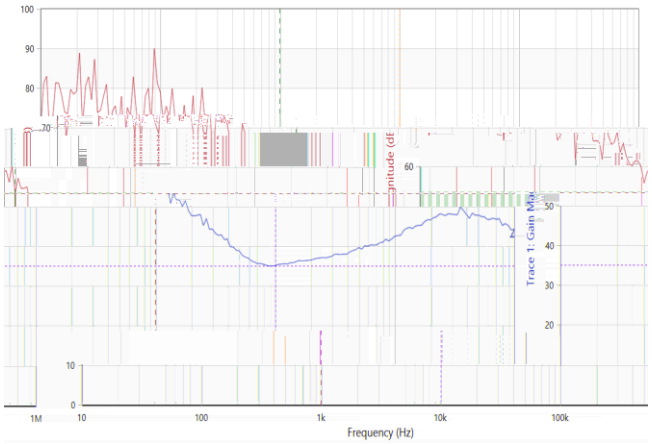

VOUT/V
VIN/V

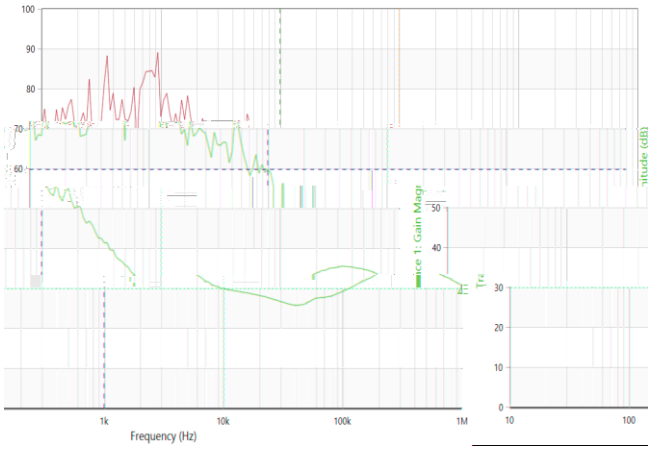

VOUT/V
Iload/mA

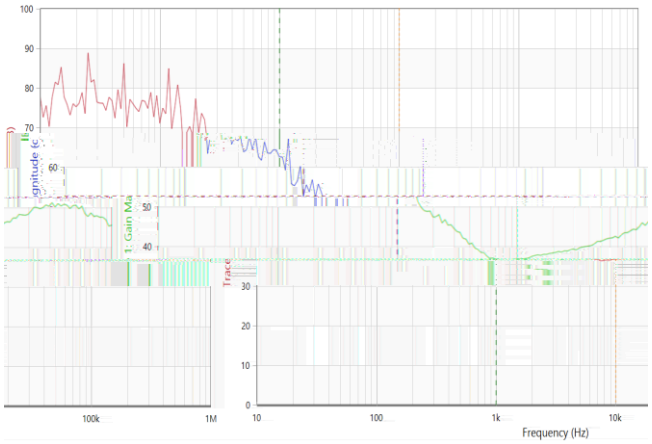

2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Isd/uA
-40
-25
-10
5
20
35
50
65
80
95
110
125
Temperature/

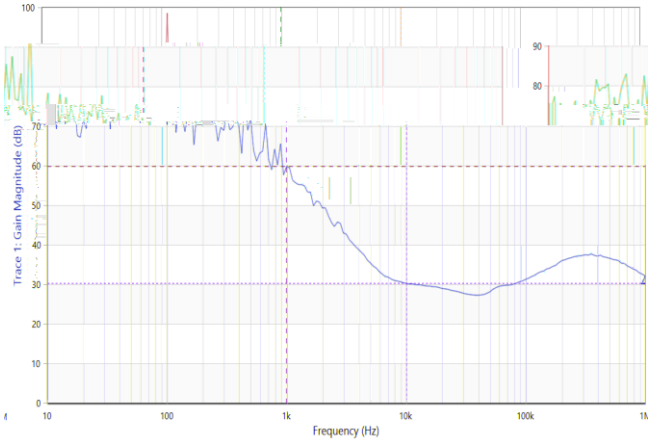

Trace 1: Gain Magnitude (dB)
Frequency (Hz)

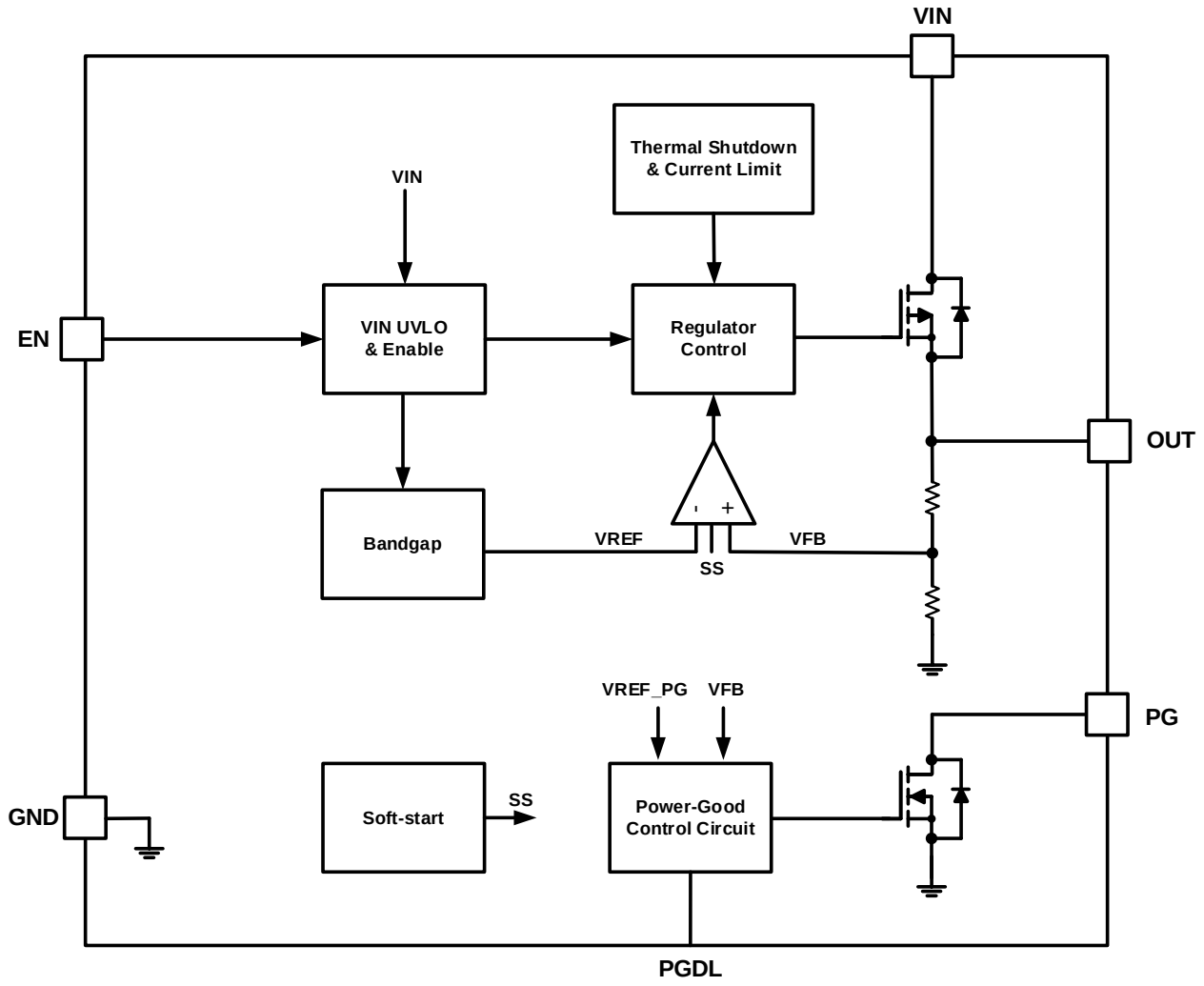

Frequency (Hz)

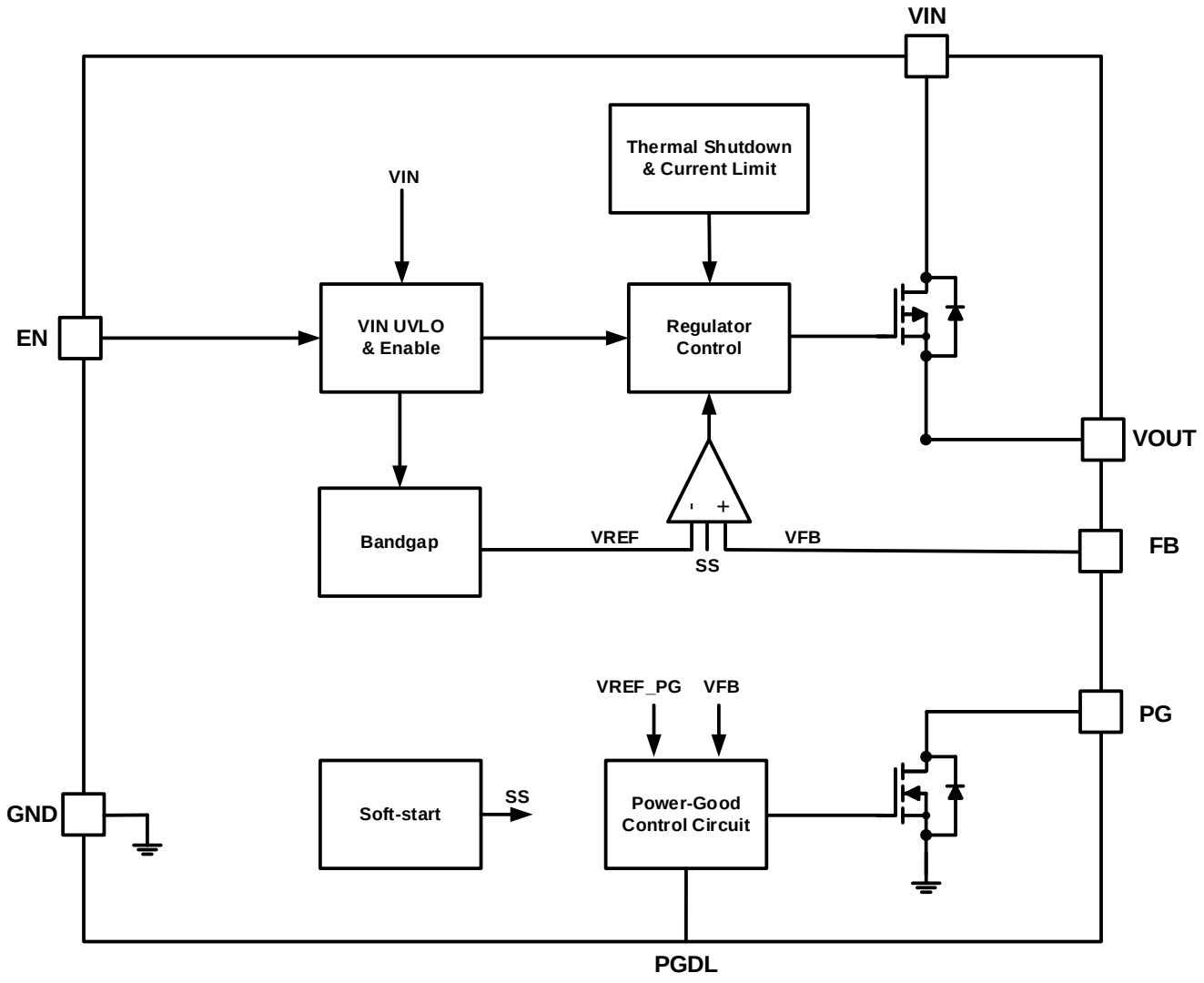

Frequency (Hz)

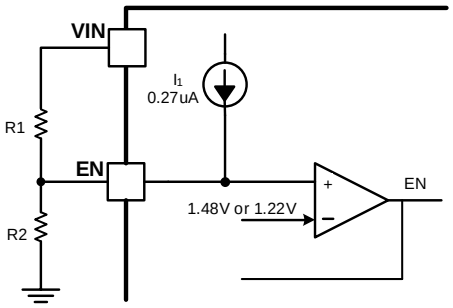

Frequency (Hz)

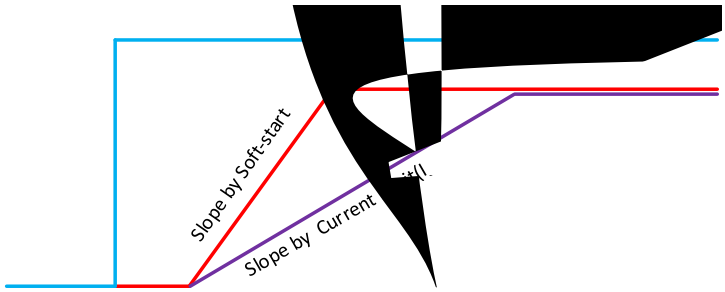

Frequency (Hz)

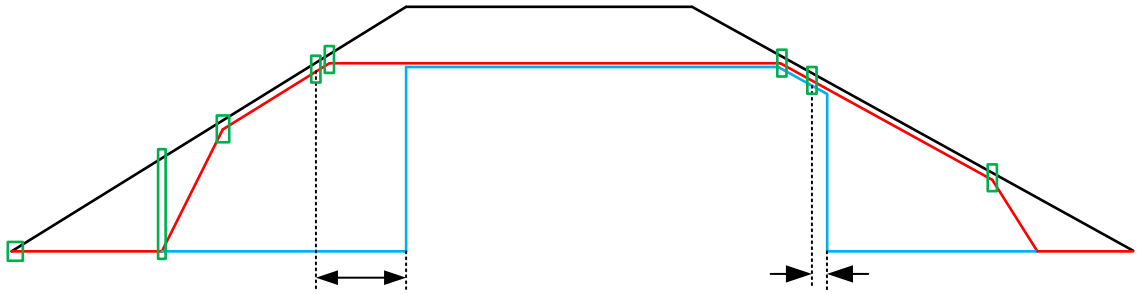

Trace 1: Gain Magnitude (dB)
Frequency (Hz)

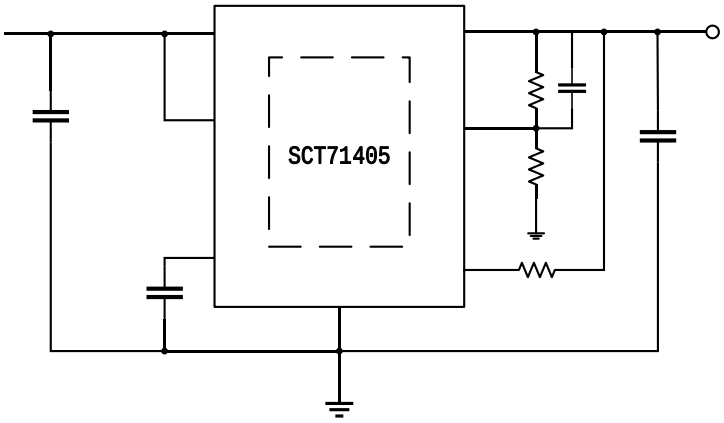

VIN
Thermal Shutdown
& Current Limit
VIN
EN
VIN UVLO
& Enable
Regulator
Control
OUT
Bandgap
VREF
VFB
SS
VREF_PG
VFB
PG
GND
Soft-start
SS
Power-Good
Control Circuit
PGDL

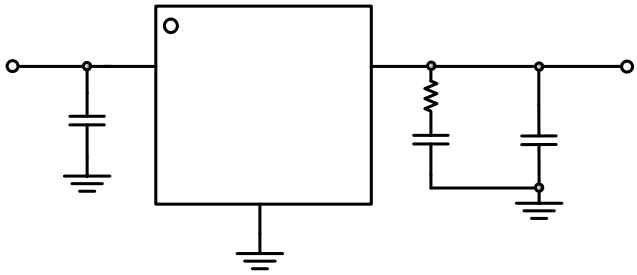

VIN
Thermal Shutdown
& Current Limit
VIN
EN
VIN UVLO
& Enable
Regulator
Control
VOUT
Bandgap
VREF
VFB
SS
FB
VREF_PG
VFB
PG
GND
Soft-start
SS
Power-Good
Control Circuit
PGDL

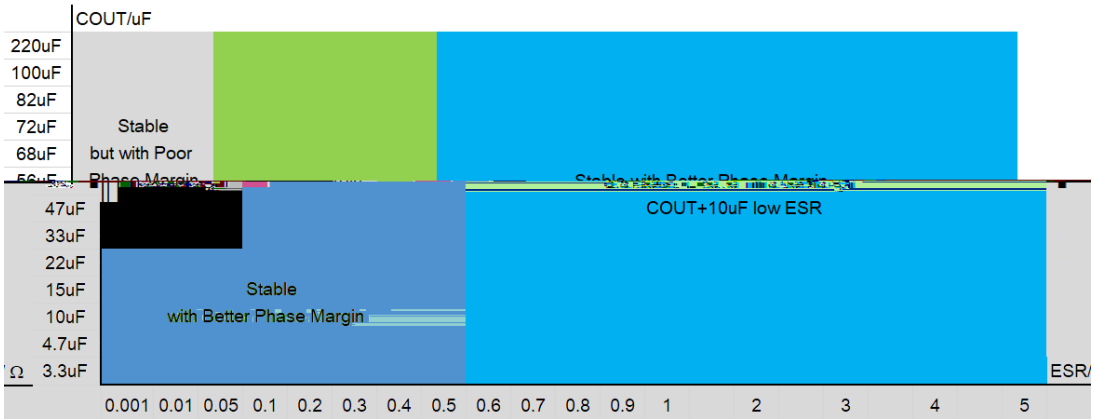

VIN
I1
0.27uA
R1
EN
EN
1.48V or 1.22V
R2

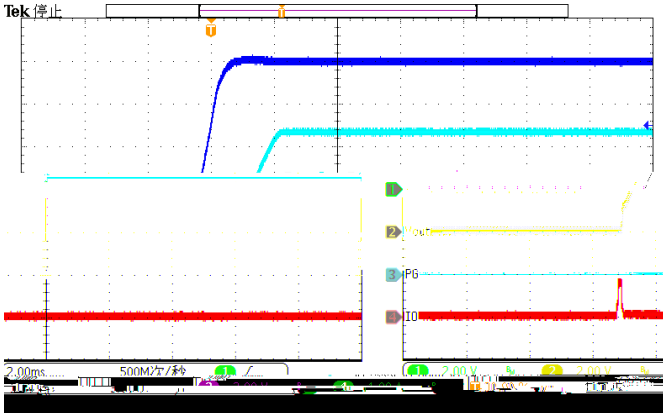

Slope by Soft-start
Slope by Current

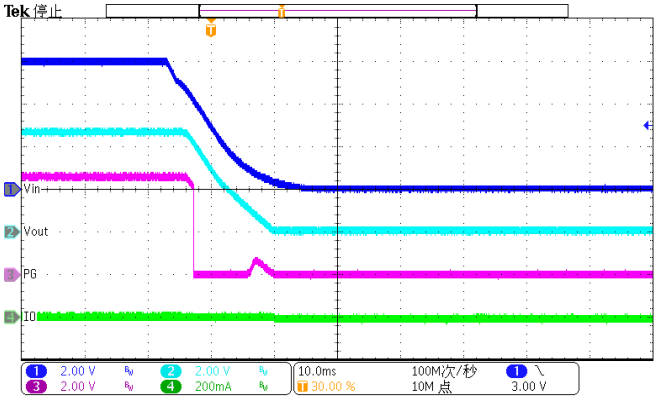


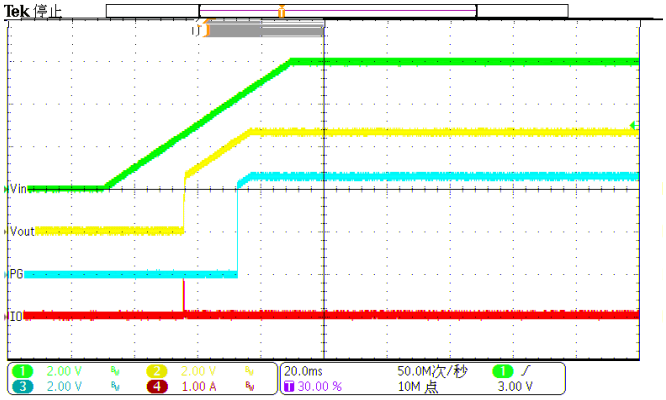

SCT71405

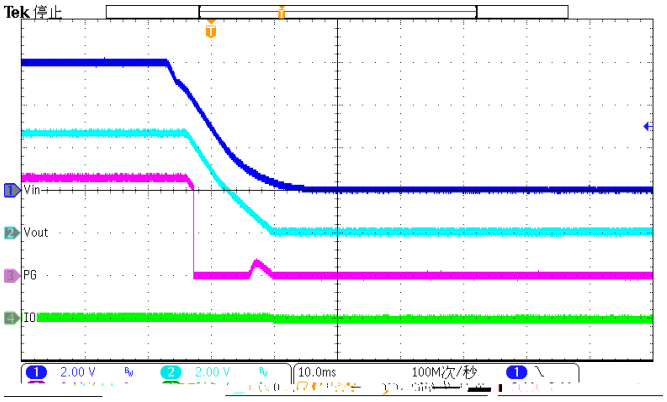


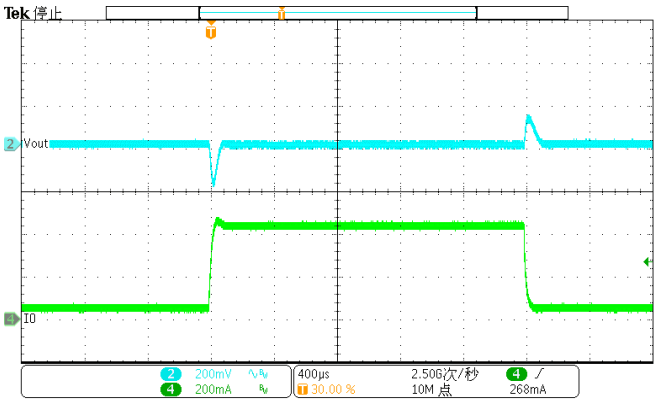

COUT/uF
220uF
100uF
82uF
72uF
68uF
47uF
33uF
22uF
15uF
10uF
4.7uF
3.3uF
Ω
Stable
but with Poor
Phase Margin
Stable
with Better Phase Margin
COUT+10uF low ESR
ESR/
0.001 0.01 0.05 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 2 3 4 5

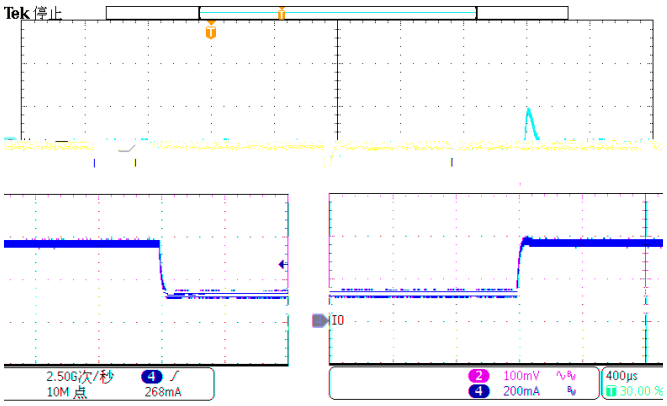

Tek 停止
PG
IO
500M次/秒

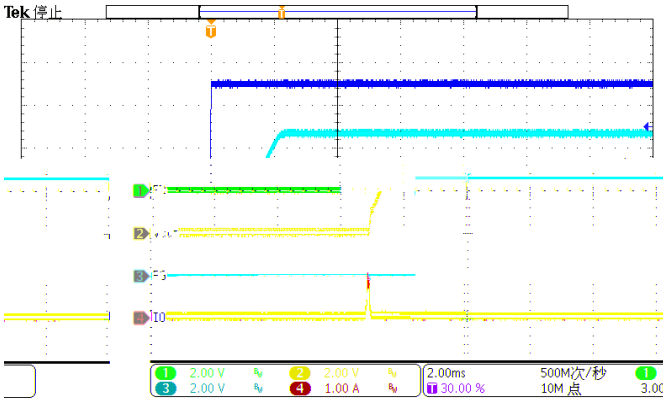

Tek 停止
Vin
Vout
PG
IO
2.00 V
2.00 V
2.00 V
200mA
10.0ms
30.00 %
100M次/秒
10M 点
3.00 V

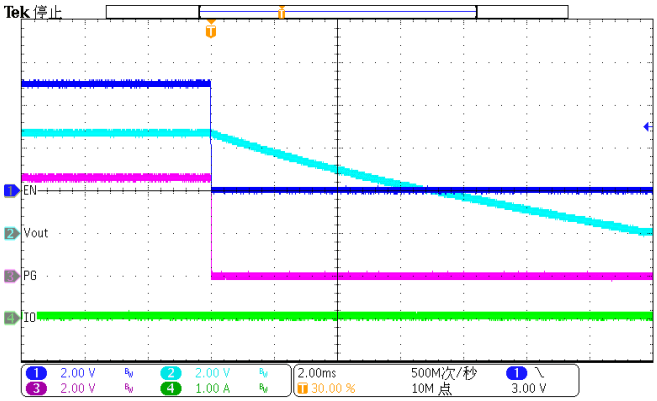

Tek 停止
Vin
Vout
PG
IO
2.00 V
2.00 V
2.00 V
1.00 A
20.0ms
30.00 %
50.0M次/秒
10M 点
3.00 V

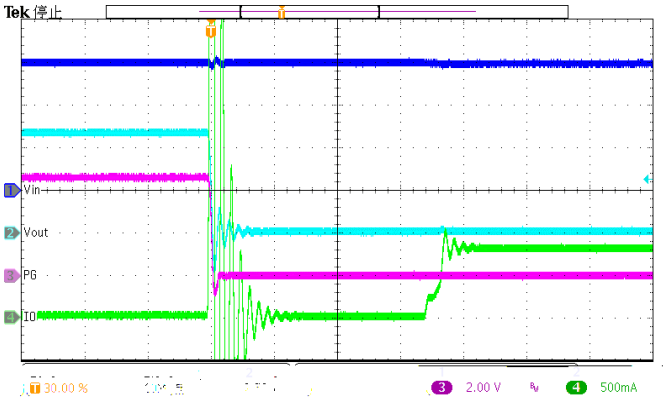

Tek 停止
Vin
Vout
PG
IO
2.00 V
2.00 V
10.0ms
100M次/秒

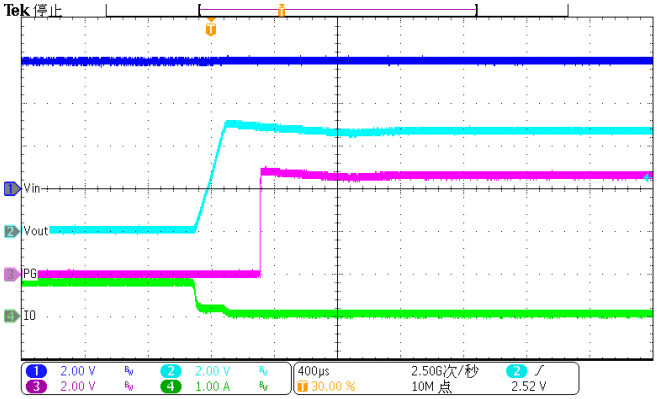

Tek 停止
Vout
IO
200mV
200mA
400µs
30.00 %
2.50G次/秒
10M 点
268mA

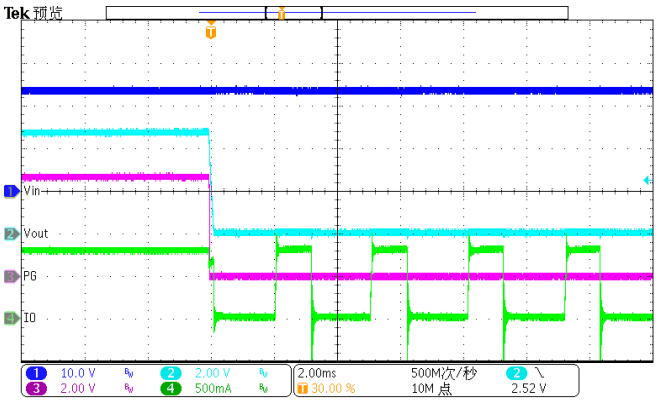

Tek 停止
IO
2.50G次/秒
10M 点
268mA
100mV
200mA
400µs
30.00 %

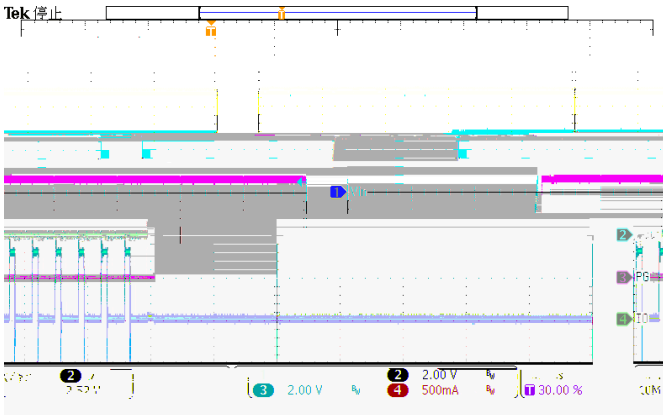

Tek 停止
2.00 V
2.00 V
1.00 A
2.00ms
30.00 %
500M次/秒
10M 点


Tek 停止
EN
Vout
PG
IO
2.00 V
2.00 V
1.00 A
2.00ms
30.00 %
500M次/秒
10M 点
3.00 V


Tek 停止
Vin
Vout
PG
IO
30.00 %
2.00 V
500mA


Tek 停止
Vin
Vout
PG
IO
2.00 V
2.00 V
1.00 A
400µs
30.00 %
2.50G次/秒
10M 点
2.52 V

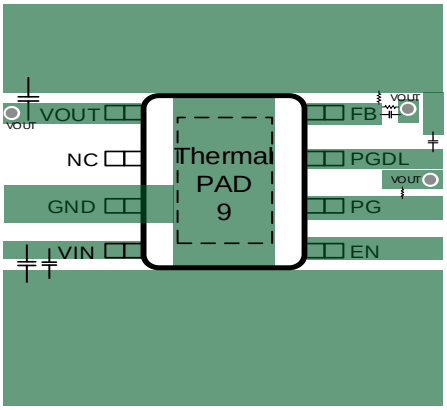

Tek 预览
Vin
Vout
PG
IO
10.0 V
2.00 V
2.00 V
500mA
2.00ms
30.00 %
500M次/秒
10M 点
2.52 V

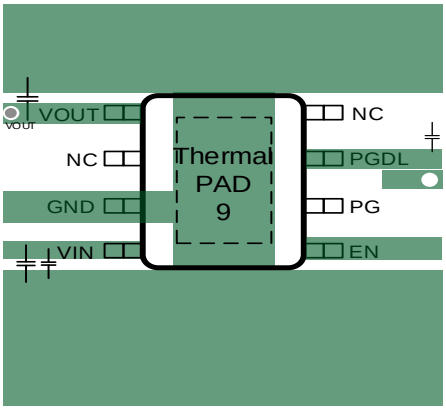

Tek 停止
2.00 V
500mA
30.00 %

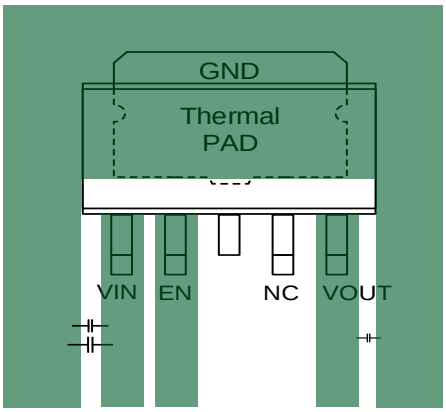
1.
2.

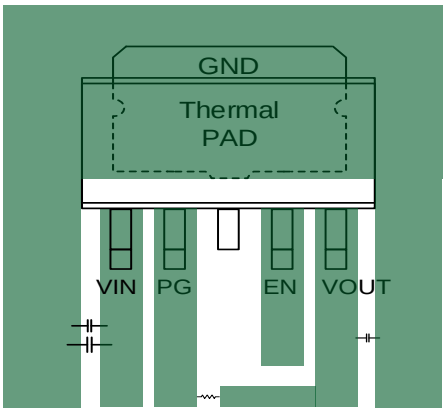
3.
4.

5.

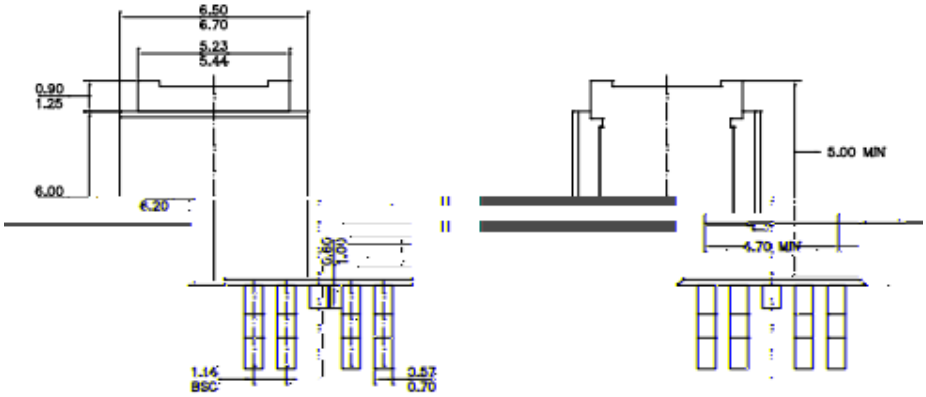

VOUT
VOUT
NC
GND
VIN
Thermal
PAD
9
FB
VOUT
PGDL
VOUT
PG
EN


VOUT
VOUT
NC
GND
VIN
Thermal
PAD
9
NC
PGDL
PG
EN

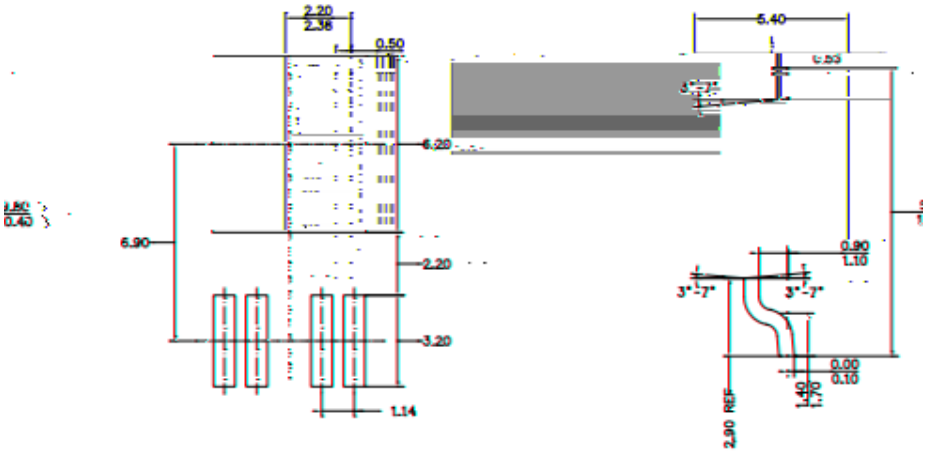

GND
Thermal
PAD
VIN
EN
NC
VOUT


GND
Thermal
PAD
VIN
PG
EN
VOUT

PACKAGE OUTLINE DRAWING FOR TO252-4L
POD-0040 Revision 0.0



TOP VIEW **BOTTOM VIEW**



RECOMMENDED LAND PATTERN **SIDE VIEW**

NOTE:

1) ALL DIMENSIONS ARE IN MILLIM
2) PACKAGE LENGTH DOES NOT I
3) PACKAGE WIDTH DOES NOT IN
4) DRAWING CONFORMS TO JEDE
5) DRAWING IS NOT TO SCALE.

IETERS.
NCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
CLUDE INTERLEAD FLASH OR PROTRUSIONS.
C TO-252.

7.
8.
9.
10.
11.