3V-40V Vin, 300mA, Ultra-Low Quiescent Current LDO

01 2 0 01

1

PARAMETER	DEFINITION	MIN	MAX	UNIT
+0	+			
1	1			
0			+0	
%+0	+			(
%1	1			(
	1			
	1			%
,	1			%

1

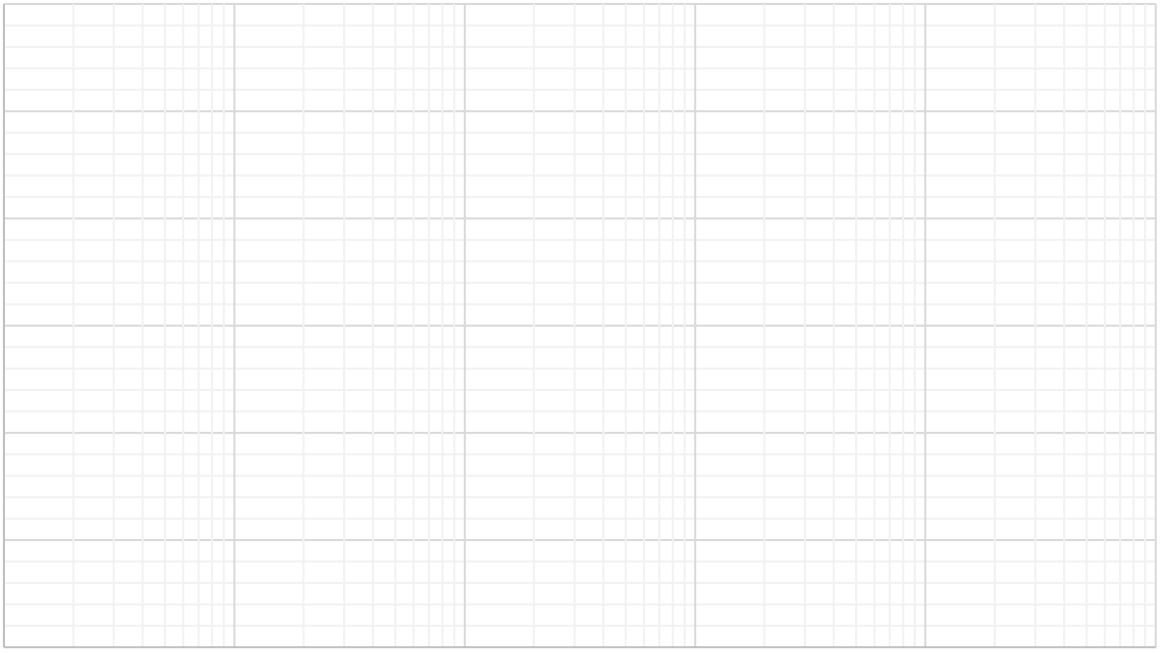
PARAMETER	DEFINITION	MIN	MAX	UNIT
+0	/			
1	/			
0	/		+0	
(	/			

-0 1 %01

(% % .

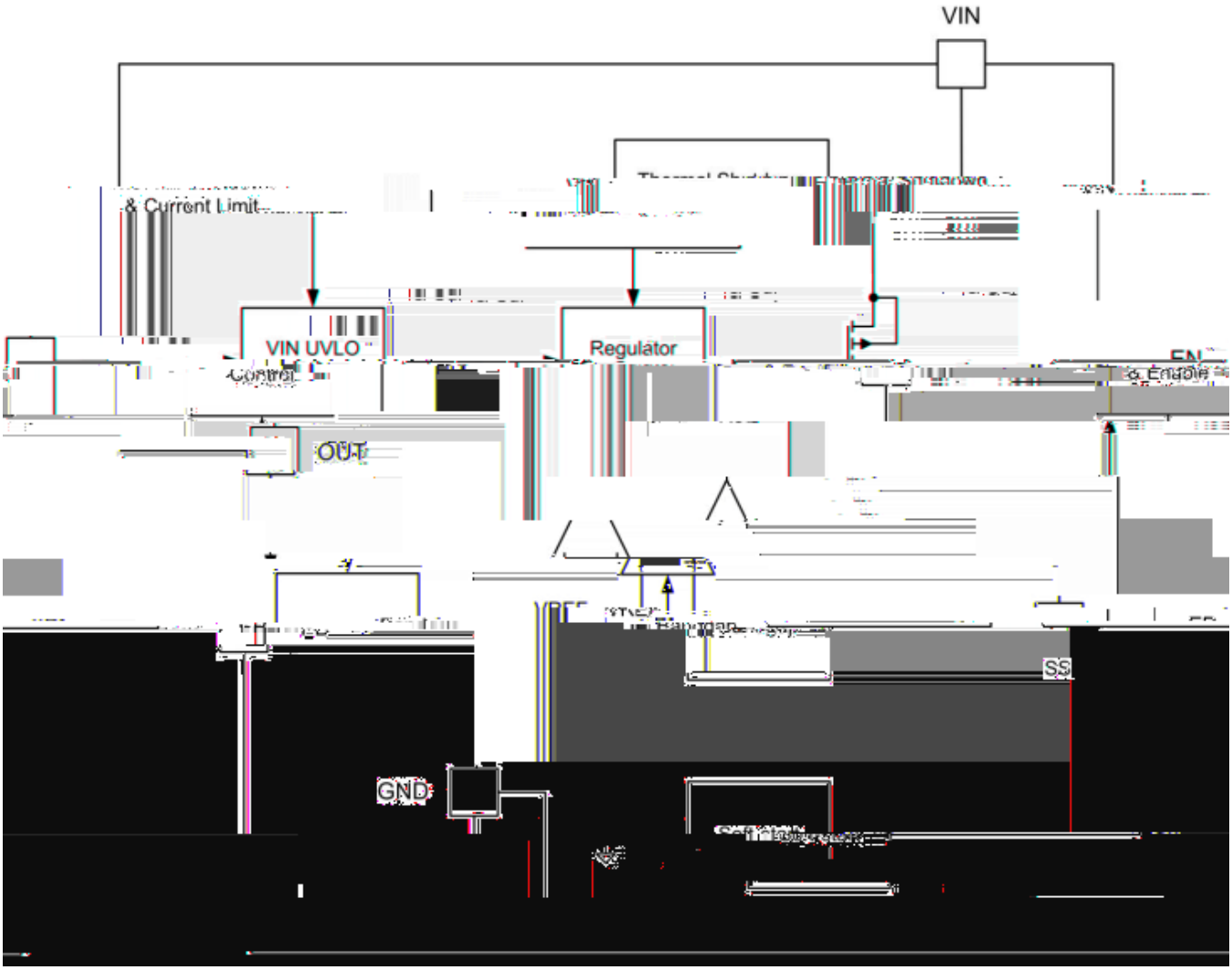
2 (. %

(% 1 % (% + 0



(2 (
+0 1 % (+1

(2 (
+0 1 % (%1 (


VIN
& Current Limit
VIN UVLO
Control
Regulator
EN
& Enable
OUT
SS
GND

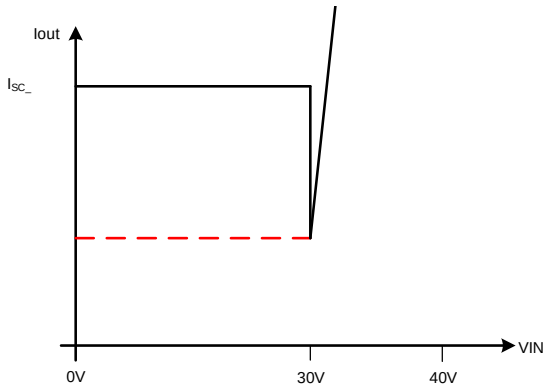
((&

+

+

VIN_HIGH Control %

+



(% . ((

Internal Soft-Start

%

+ 0 . &1

(1

(1 +%A -0.1 -0 1

+%A -0 -) -0

+ % +%A -0.1 +%A -0 -)

(% % .

ª¬ÓšëÜ ‘ a‘'ëõ• SD.g4q ìÈ^sn-US

1	0
/ 1 %	
1 % %1	(((
+ % %0	((

+ 0 1
(
1 0 0) 0& +
(
0
) 0& +

Output Voltage

(

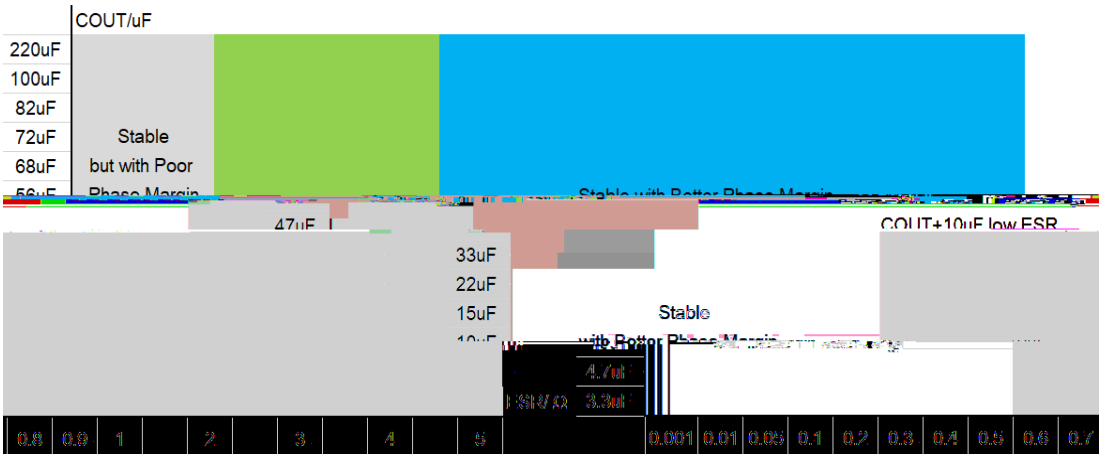
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(

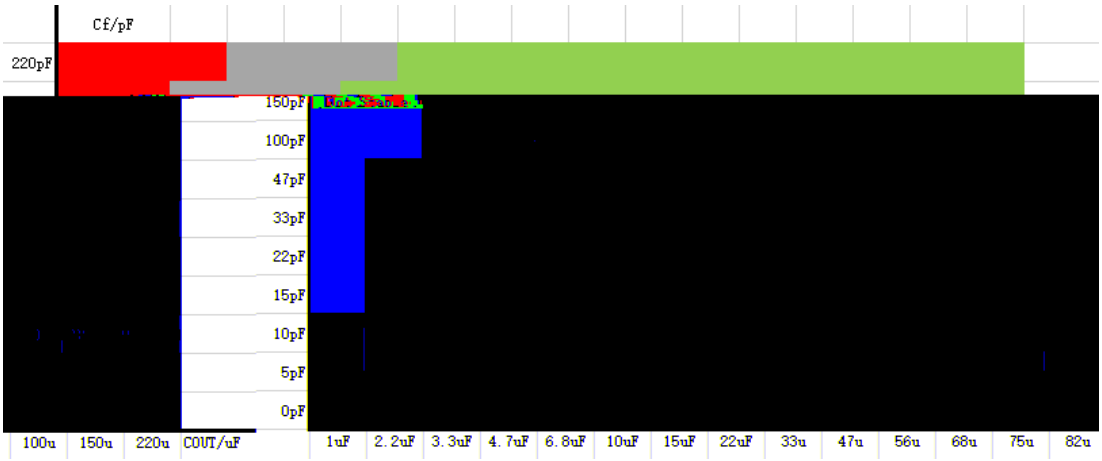
Table 1: Compensation Values for Typical Output Voltage/Capacitor Combinations

	%1 (	%	-	-	%1 (
		(			

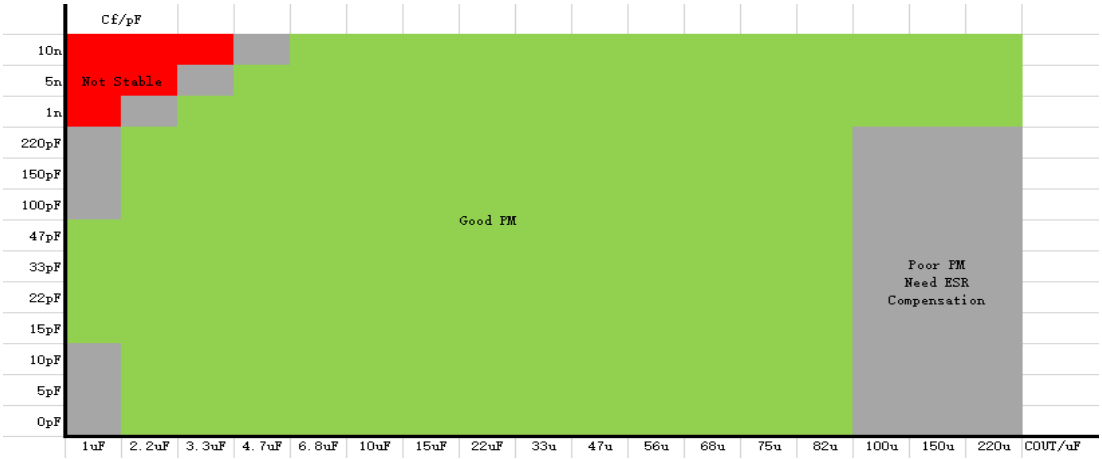
(


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

(% 1 %


Cf/pF
220pF
150pF
100pF
47pF
33pF
22pF
15pF
10pF
5pF
0pF
100u
150u
220u
COUT/uF
1uF
2.2uF
3.3uF
4.7uF
6.8uF
10uF
15uF
22uF
33u
47u
56u
68u
75u
82u

(% ((% 1


Cf/pF
10n
5n
1n
220pF
150pF
100pF
47pF
33pF
22pF
15pF
10pF
5pF
0pF
Not Stable
Good PM
Poor PM
Need ESR
Compensation
1uF
2.2uF
3.3uF
4.7uF
6.8uF
10uF
15uF
22uF
33u
47u
56u
68u
75u
82u
100u
150u
220u
COUT/uF

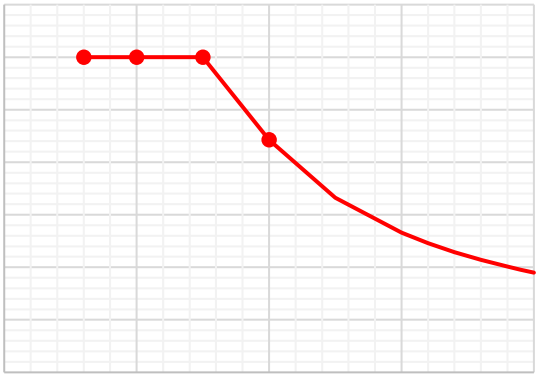
(% ((% 1

(% % .

2 (. %

Power Dissipation and Thermal Performance

2 . &1



(/ 1 % + 1 / 12 . , &A

(/ 1 % + 1 / 12 . , &A

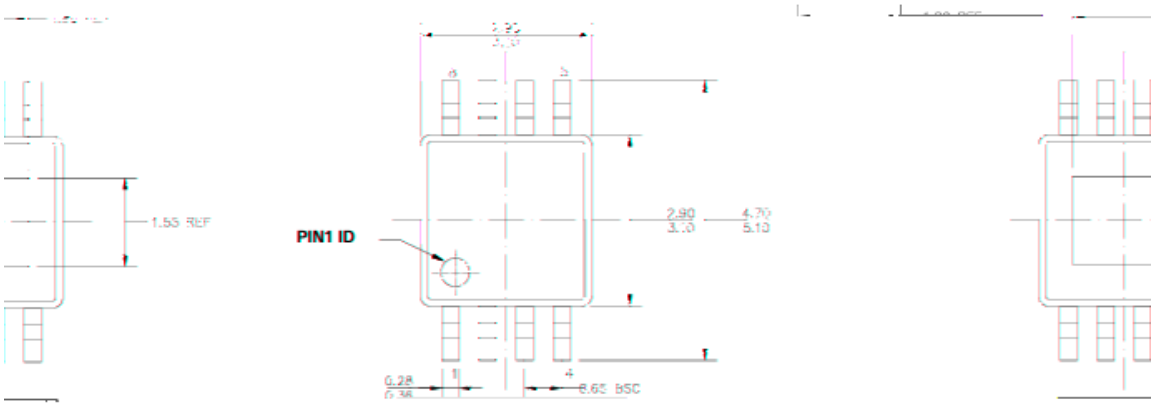
(/ 2 & / 12 . ,

(/ 1 % + / 12 . ,

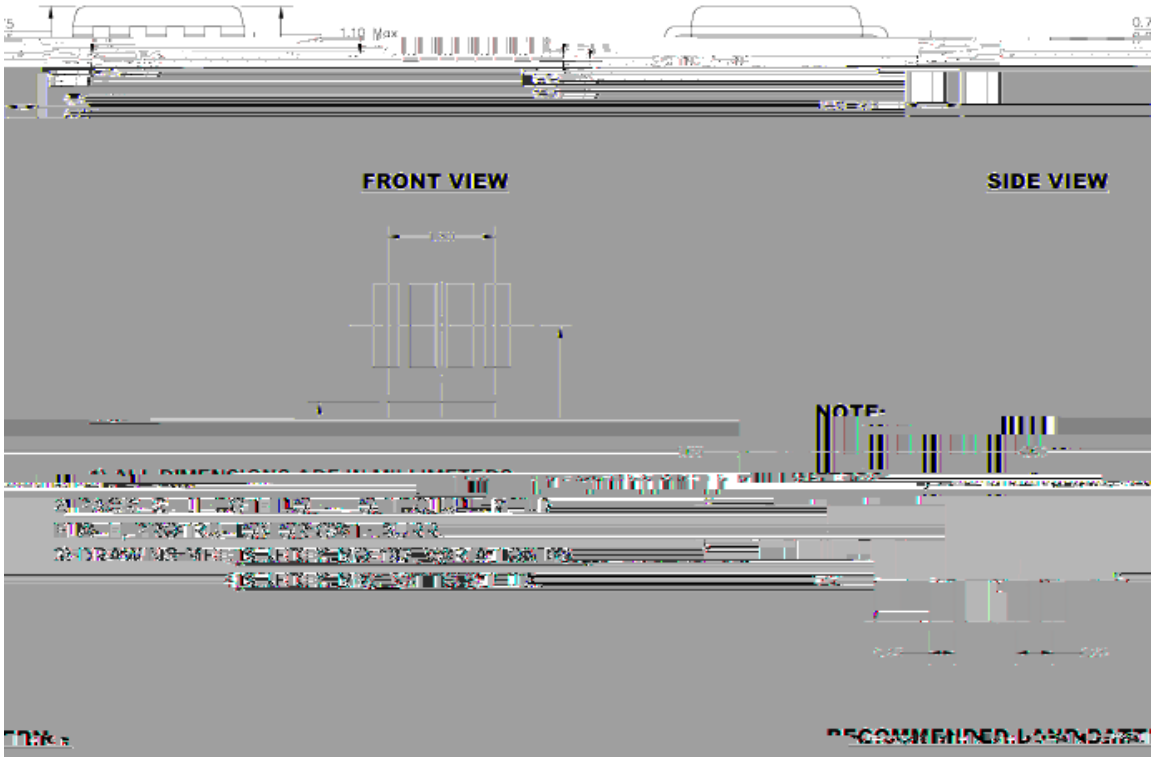
Application Waveforms

(2 + (2 +

(2 +



TOP VIEW **BOTTOM VIEW**



/ 12 . 2 1 &

NOTE:

1. & , & % / 1
2. &
3.
4.
5. &
6. % 2%

NOTICE: The information inq3hnennewiLnti79cieewaegoneq3hne95hq3iL