25'(5$%/('(9,&(	3$&.$*,1* 7<3(	67$1'$5' 3$&. 47<	3$&.$*(0$5.,1*	3,16	3$&.$*('(6&5,37,21

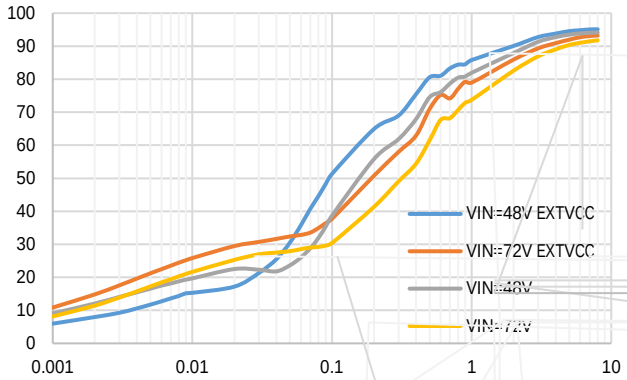
3$5$0(7(5	7+(50$/ 0(75,&	')1 ; /	81,7

6<0%2	3$5$0(7(5	7(67 &21',7,21	0,1 7<3 0$;	81,7

6RIWWDUW DQG 9ROWDJH 7UDFNLQJ

3RZHU *RRG ,QGLFDWRU

6<0%2	3$5$0(7(5	7(67 &21',7,21	0,1 7<3 0$;	81,7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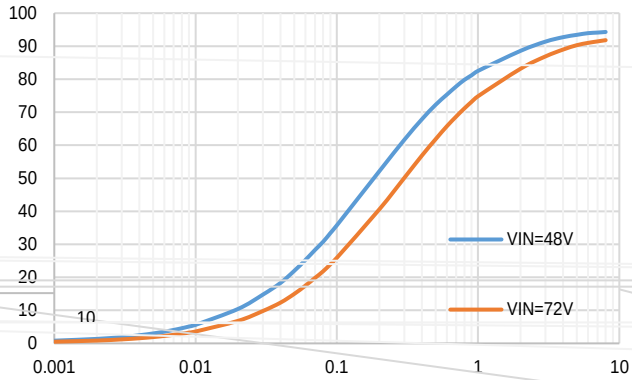
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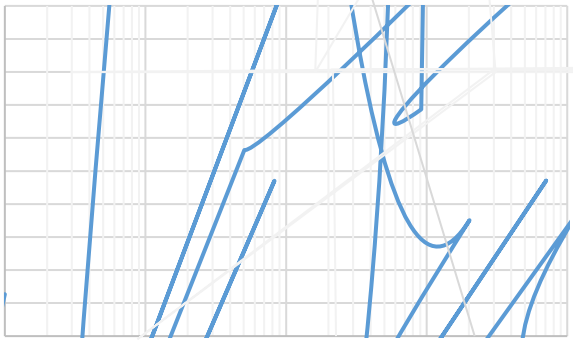

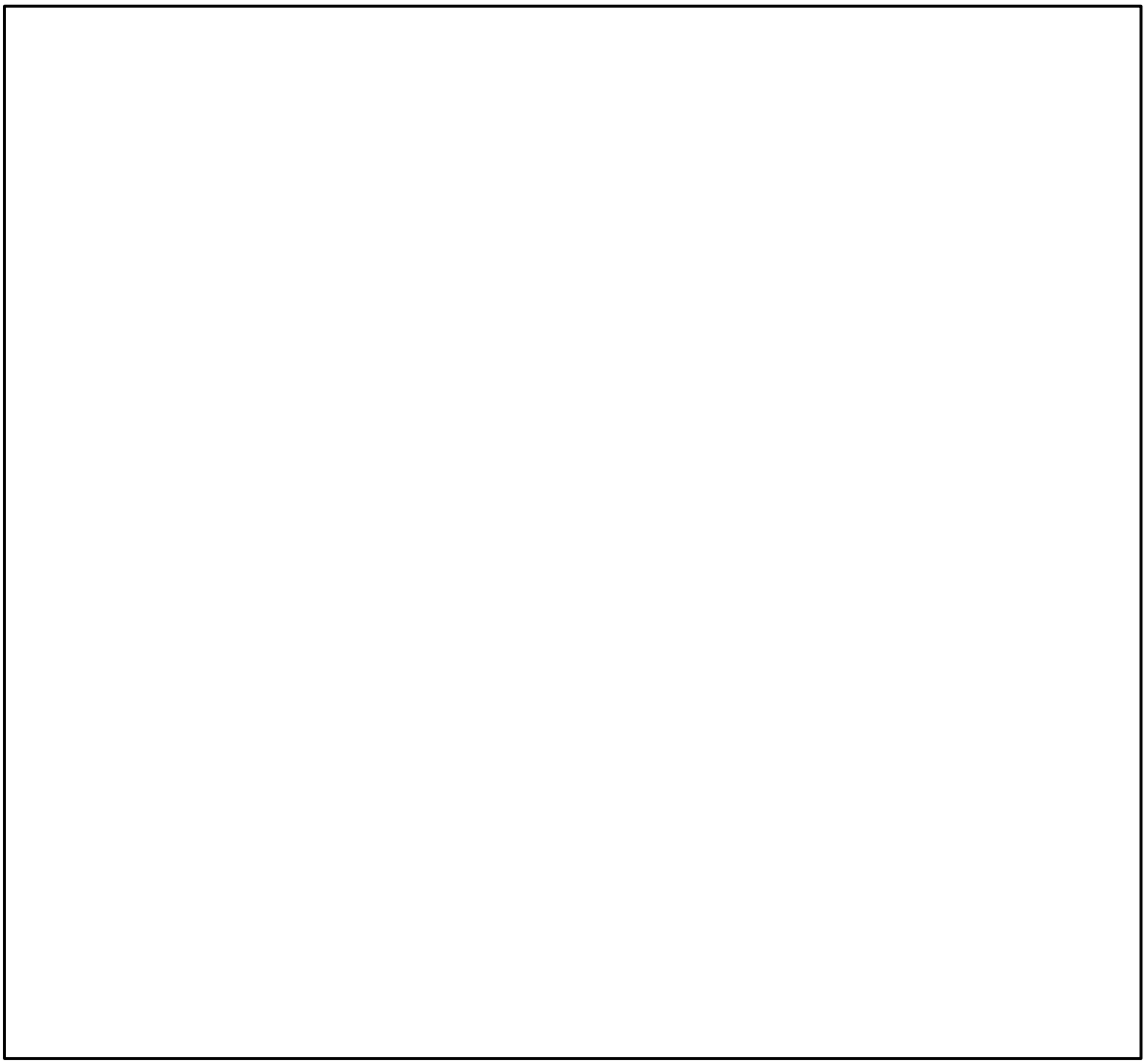

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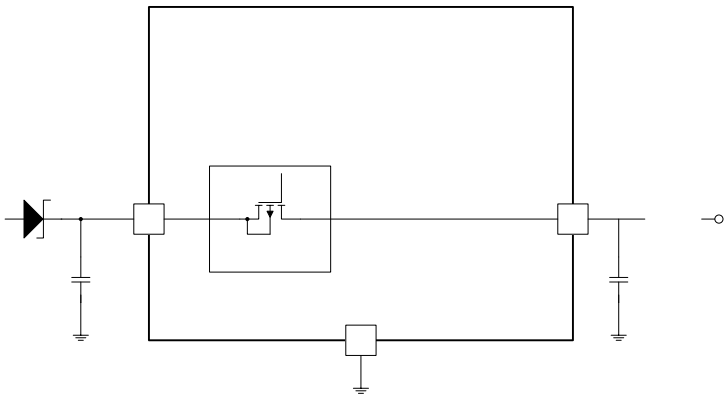
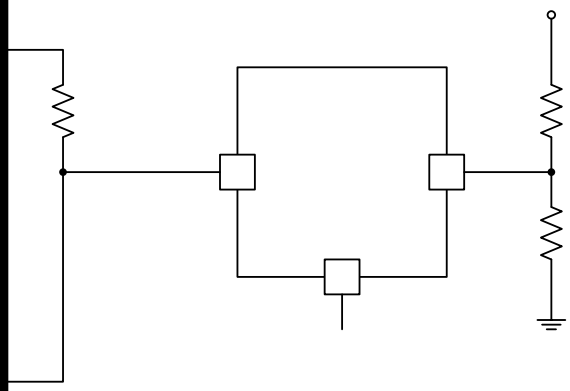
heat0<00530052>-7<005A0042TJ 3>] TJ ET Q01T Q> BDC 612 792 re W* n /F5 9.96612 792 re W



(QDEDDG SURJUDPPDEOH 89/2



Q L] D W L R Q

J H T X H Q F \ 6 H W 5 H Ÿ V L

'HYLFH)XQFWLRQDO 0RGHV

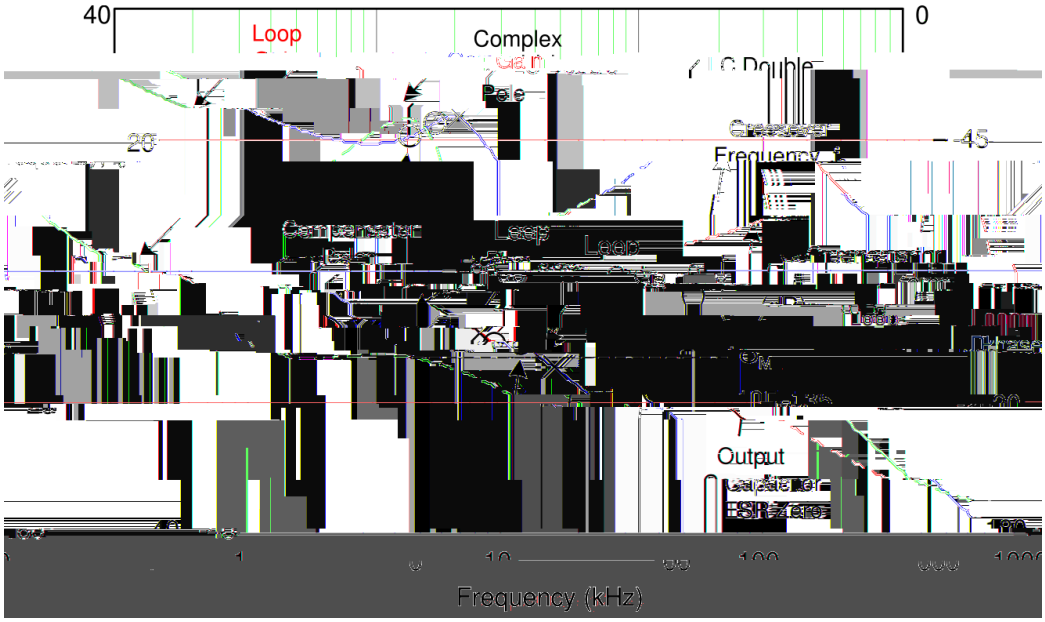
Shutdown Mode

Standby Mode

Active Mode

	$G_{vd}(s) = \frac{V_o(s)}{d(s)} V_{IN} \frac{1 + \frac{s}{ESR}}{1 + \frac{s}{Q_o \omega_o} + \frac{s^2}{\omega_o^2}}$
	$G_C(s) = \frac{V_{comp}(s)}{V_o(s)} \frac{1}{R_{FB} C_C s} \frac{1 + \frac{s}{\omega_z}}{1 + \frac{s}{\omega_p}}$
	$F_m = \frac{d(s)}{V_{comp}(s)} \frac{1}{V_{ramp}}$

$\sqrt{\quad}$	$_{ESR}$ $\overline{R_{ESR} \quad C_{OUT}}$	$_{p}$ $\overline{R_C \quad C_C}$	
		$_{p}$ $\overline{R_C \quad C_C}$	$_{z}$ $\overline{R_{FB} \quad R_C \quad C_C}$



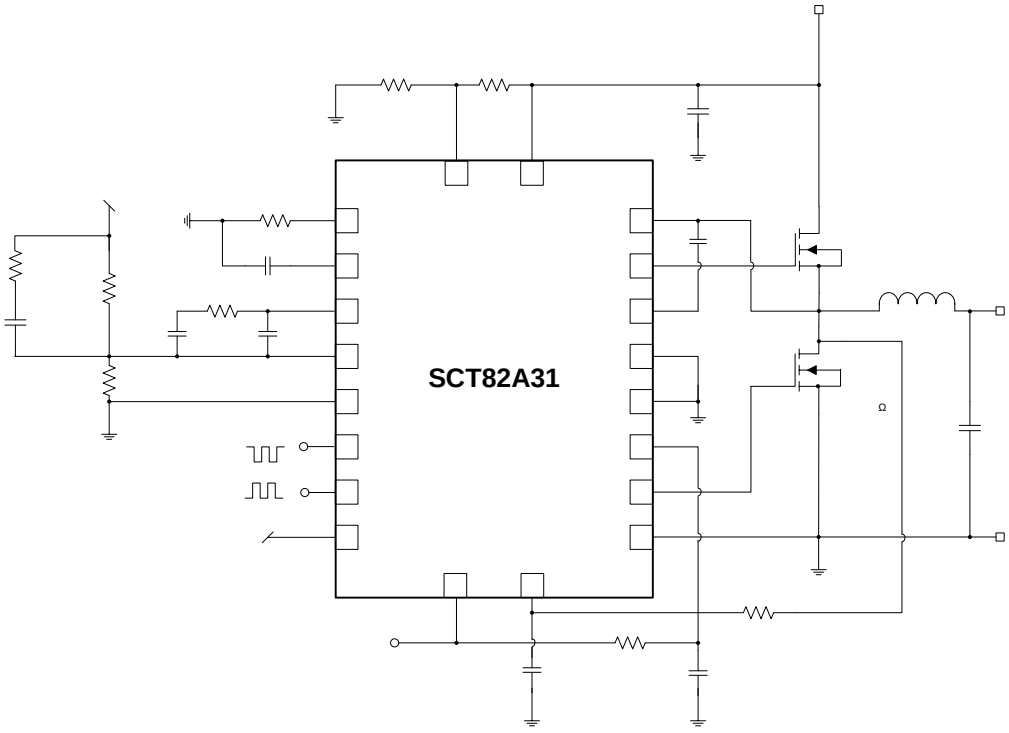
$$T_V \; s \quad \frac{V_{IN}}{V_{ramp}} \; \overline{s \; R_{FB} \quad C_C} \quad \overline{K}$$

$$_{c} \qquad f_C \quad \overline{R_{FB} \quad C_C} \; \frac{V_{IN}}{V_{ramp}} \; \overline{K}$$

&] . &R &] &R &S &6:

$ S S O L F D W L R Q : ÐRY GWRLUQXH G

7\SLFDO $SSOLFDWLRQ

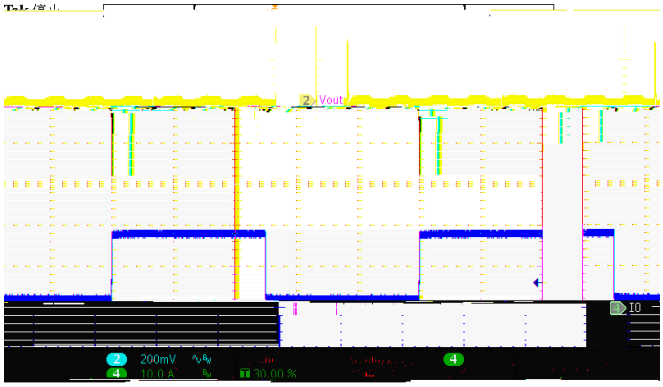


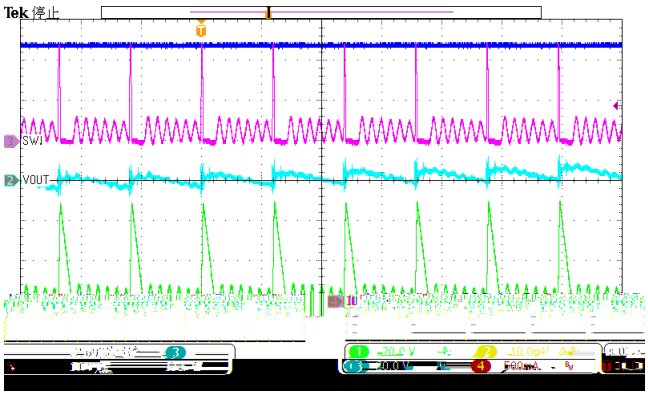
)LJXUH $SSOLFDWLRQ 6FKHPDWLF% XFN 5HJXODWRU DW N+]

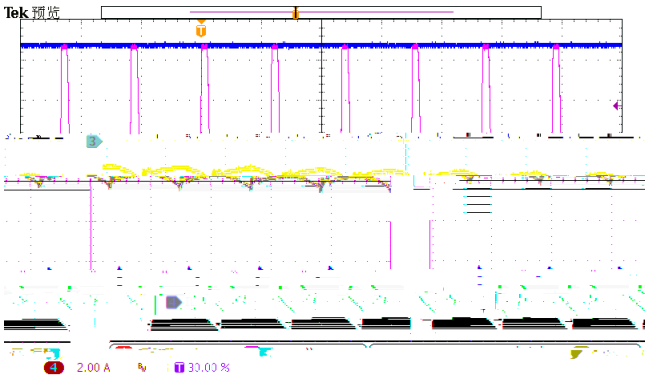
'HVLJQ3URFHGXUHV

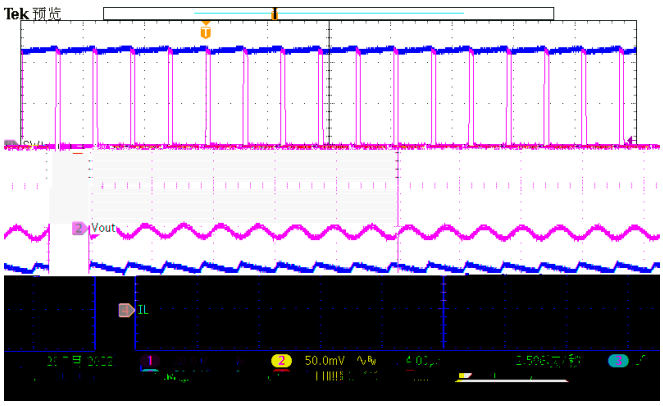
$SSOLFDWLRQ :DYHIRUPV

$ S S O L F D W L R Q : ÐRY QG WRLLQPXVH G









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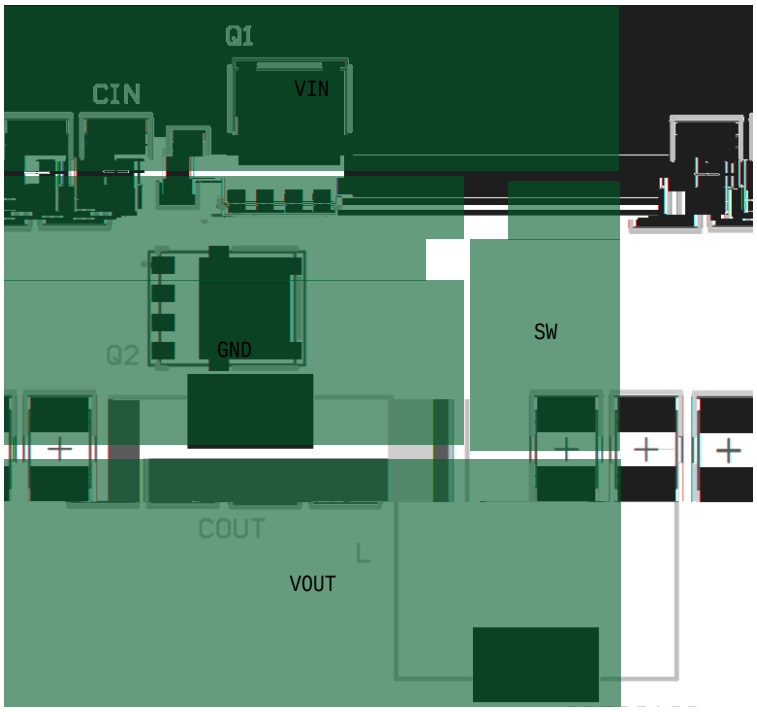

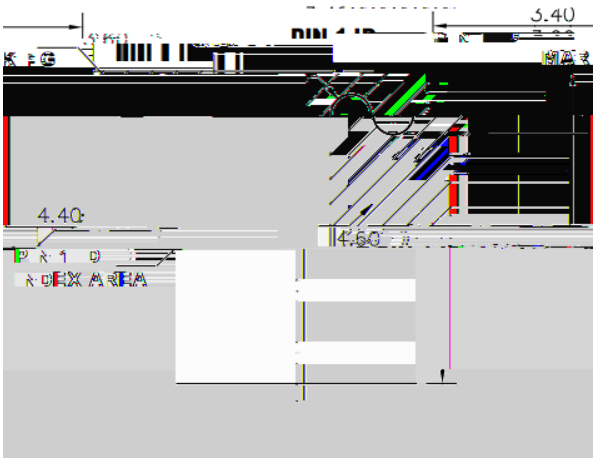
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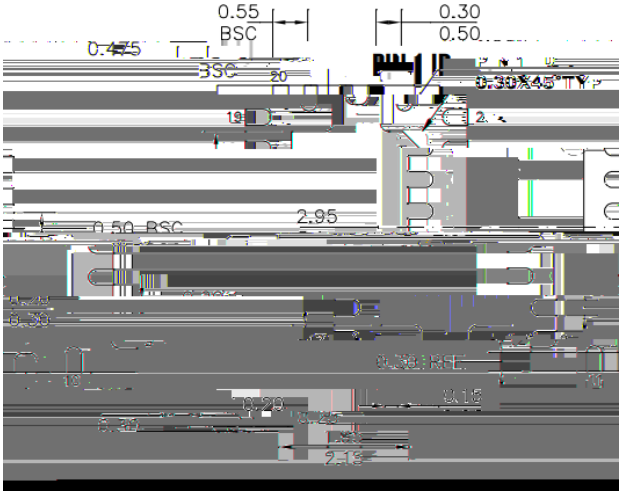
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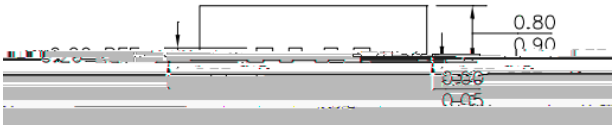
2.95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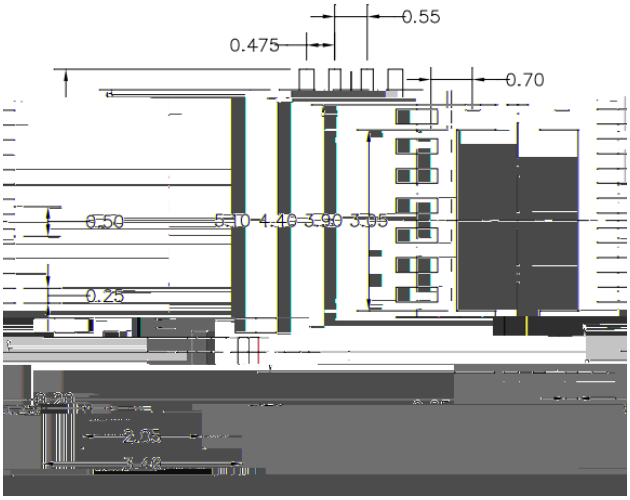
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