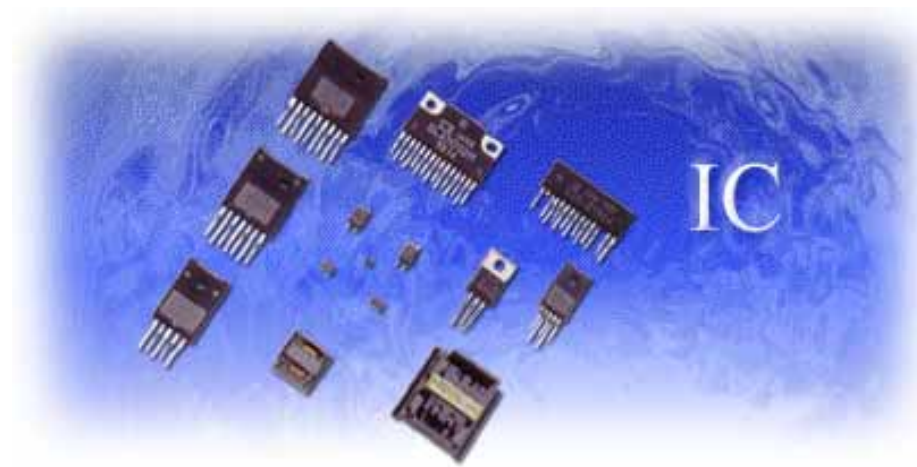


# SSC9502S

## Proposal Report



<b>Contents</b>	<b>Output: 24V/6A, 12V/3A</b> <b>Input: 282Vac (400Vdc)</b> <b>Pout= 180W</b>
<b>Application</b>	
<b>Master</b>	<b>Sato</b>
<b>Checked by</b>	<b>Wu</b>
<b>Checked by</b>	<b>Chao</b>
<b>Written By</b>	<b>C-Chang</b>
<b>Date</b>	<b>2008 / 06 / 19</b>

RMI  
 Taipei 100, TAIWAN R.O.C. Taiwan SanKen  
 Tel: +886-2-556-3151  
 Fax: +886-2-556-3151

## Contents

1. Efficiency & Temperature Check -----	
Pg 3	
2. Circuit diagram -----	
Pg 4	
3. Transformer specification -----	
Pg 5	
4. Start-up Waveform Check -----	P
g 6	
5. Start-up Waveform Check -----	P
g 7	
6. OC pin waveform check -----	
Pg 8	
7. RC pin waveform check -----	
Pg 9	
8. RV pin waveform check -----	P
g 10	
9. OLP waveform check -----	P
g 11	
10. 2 <sup>nd</sup> Capacitor short waveform check -----	P
g 12	
11. 24V V <sub>rm</sub> check at start-up -----	P
g 13	
12. 12V V <sub>rm</sub> check at start-up -----	P
g 14	
13. Output ripple heck -----	Pg
15	

## Efficiency & Temperature Check

### Efficiency check

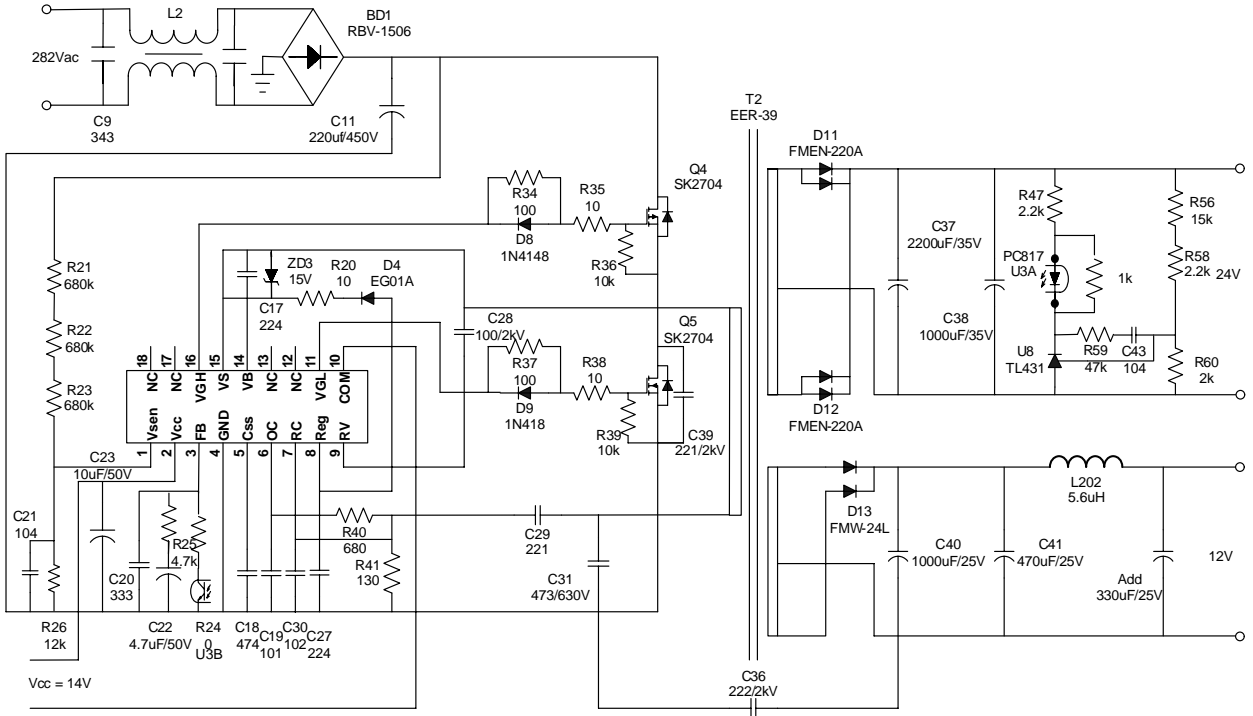
VinAC(V)	VoutDC(V)	Iout (A)	VoutDC(V)	Iout (A)	Pout (W)	Pin (W)	Eff. (%)
	24V		12V				
282	23.99	6	11.73	3	179.13	196.07	91.4

### Temperature check

Ta = 25

VinAC(V)		282
Bridge Diode( )		55
IC body( )		44
High side MOS( )		55
Low side MOS( )		57
Transformer ( )	1st wire	44
	2st wire	49
	core	43
24V Diode ( )	D11	53
	D12	48
12V Diode( )	D13	37

# Circuit diagram



## Transformer specification

Hybrid IC: SSC9502S

Input range: 282Vac

Output power: 180W (24V/6A,12V/3A)

Transformer:

Core: EER-40

Lp : 470uH

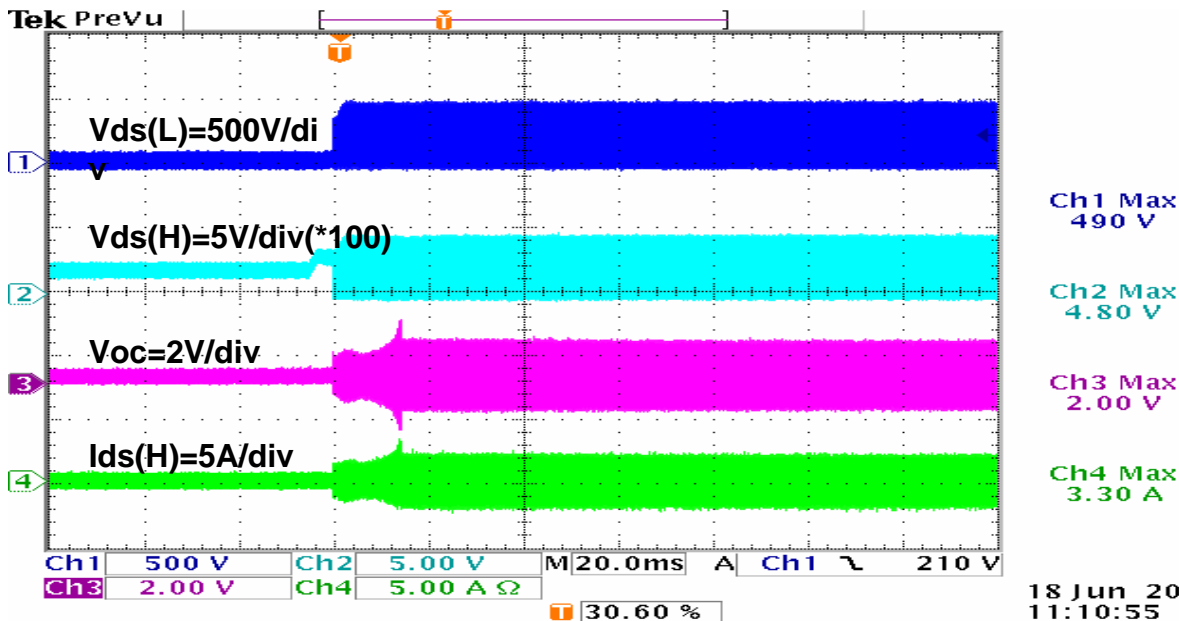
Gap: 0.4mm

Lr : 107uH

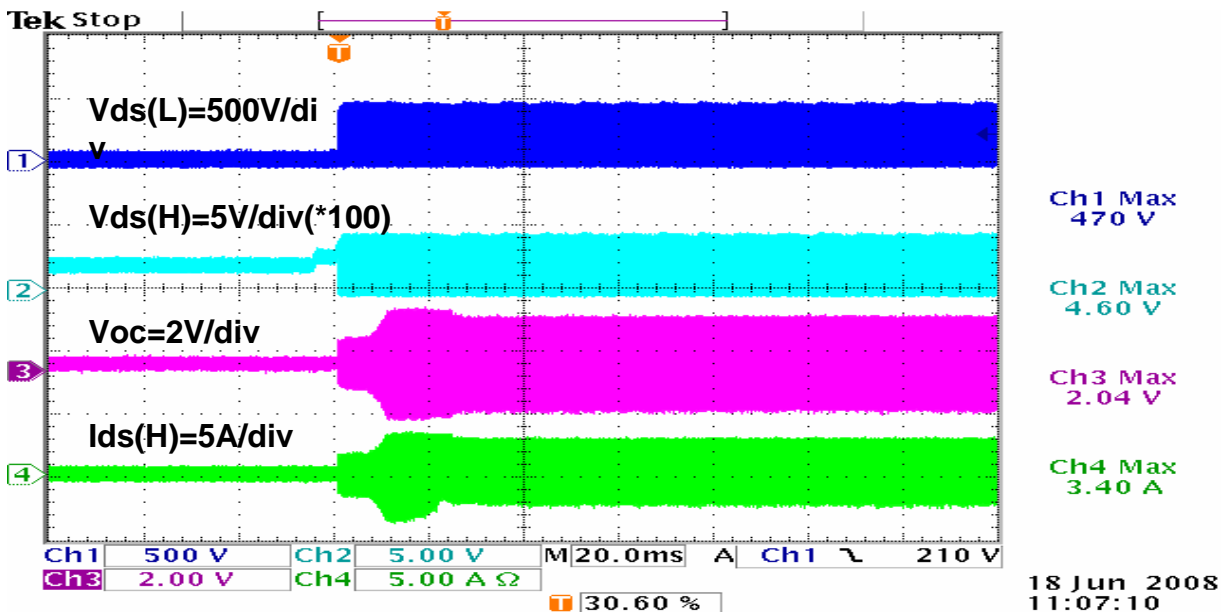
Name		Mark	Turn (T)	Wire (mm)	Winding type
Primary		P1	36	0.1Ø*80	Solenoid
Secondary	24V/6A	S1	4	0.1Ø*120	Solenoid
	12V/3A	S2	4	0.1Ø*80	Solenoid
	24V/6A	S1'	2	0.1Ø*120	Solenoid
	12V/6A	S2'	2	0.1Ø*80	Solenoid

### start-up waveforms check

No load (24V/0A,12V/0A)

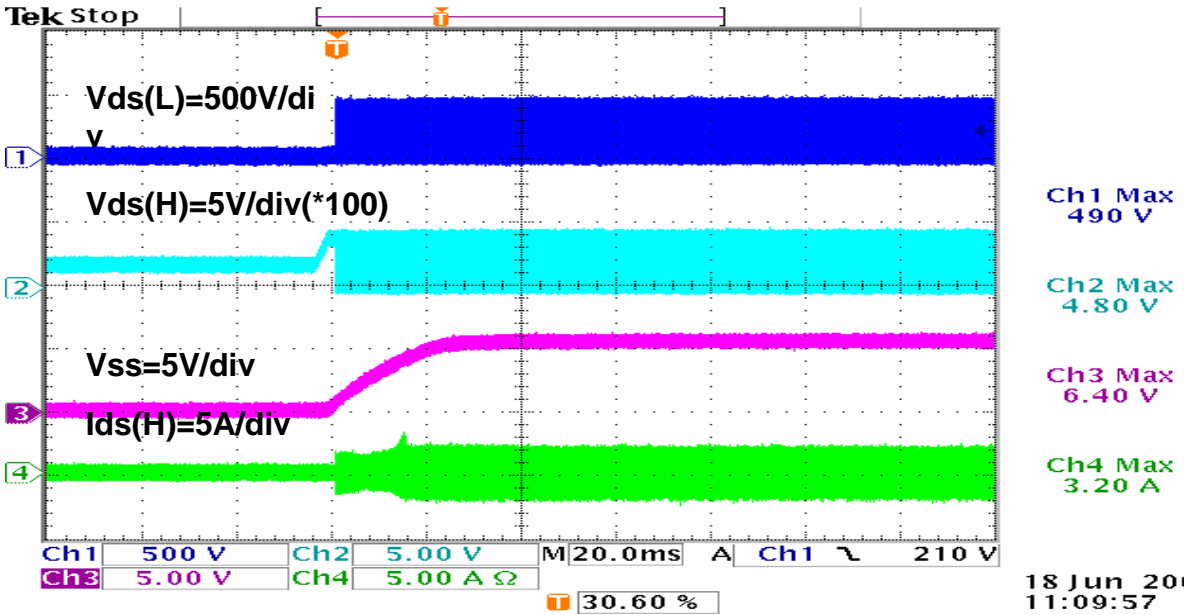


Max load (24V/6A,12V/3A)

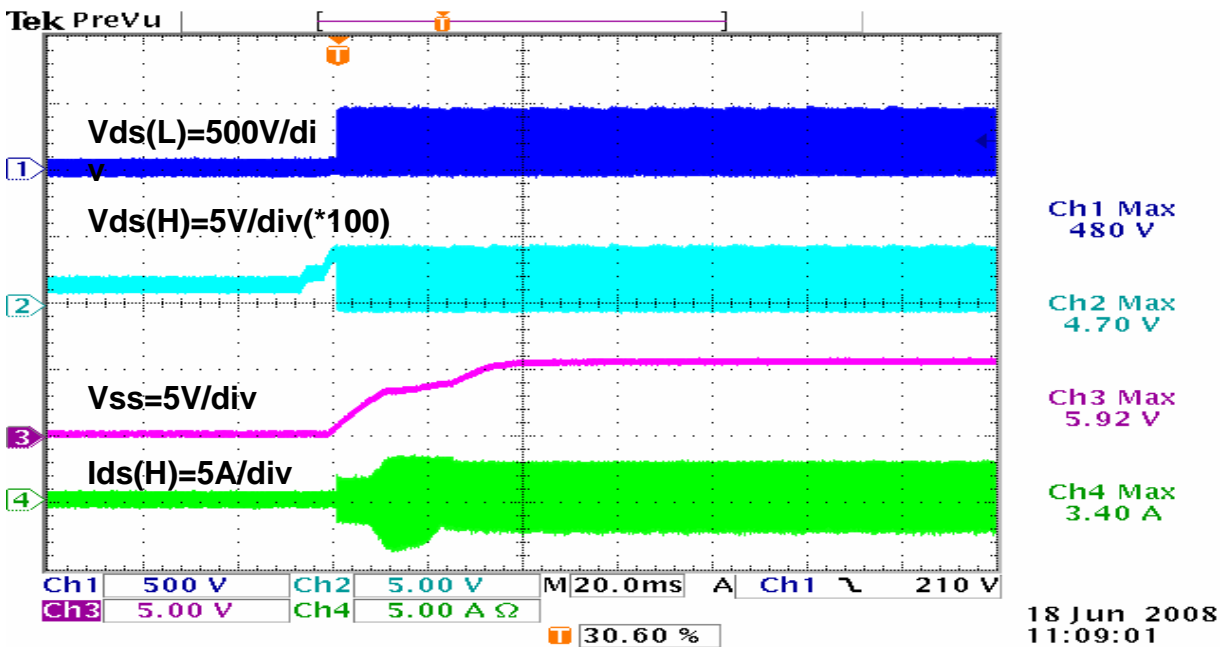


### start-up waveforms check

No load (24V/0A,12V/0A)

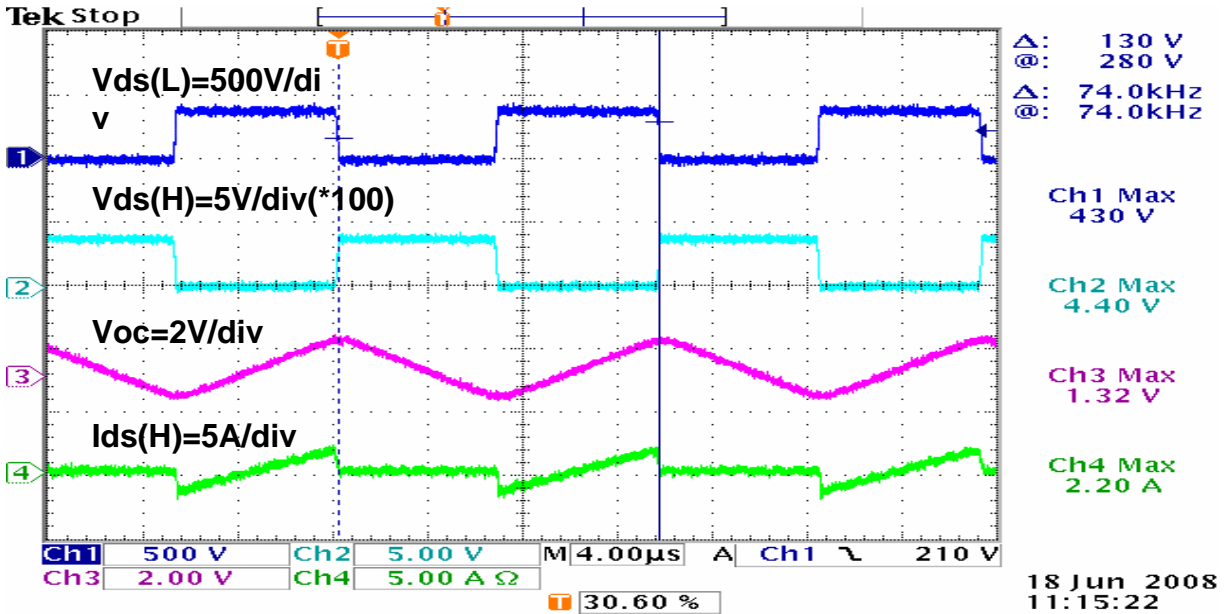


Max load (24V/6A,12V/3A)

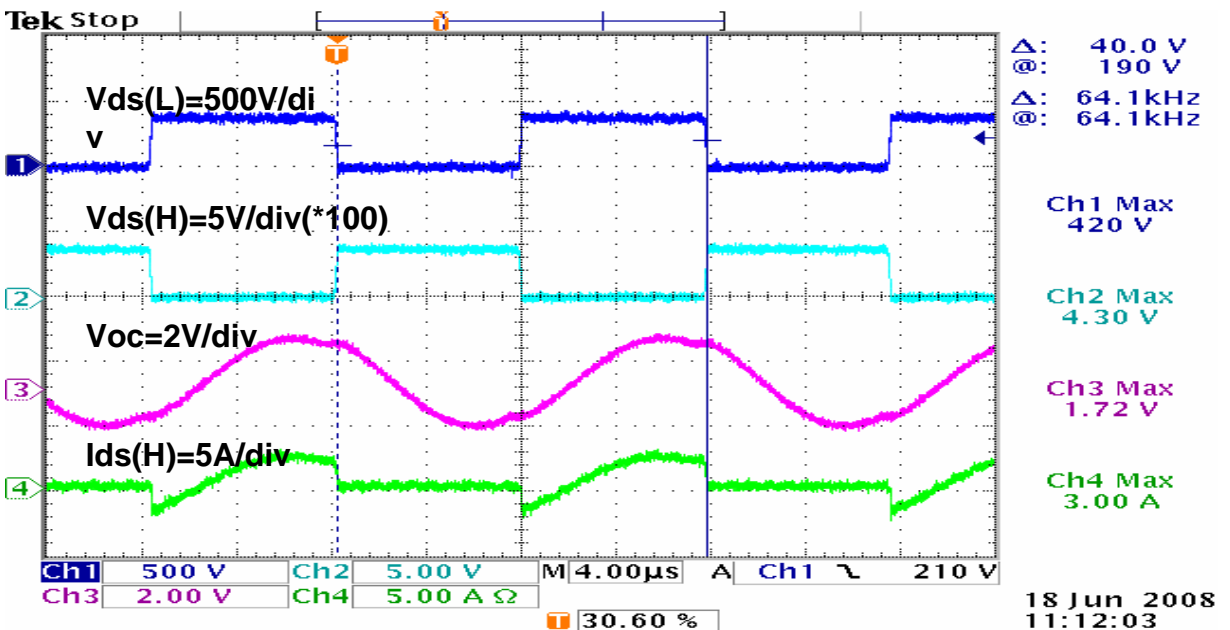


### OC pin waveforms check

No load (24V/0A,12V/0A)



Max load (24V/6A,12V/3A)

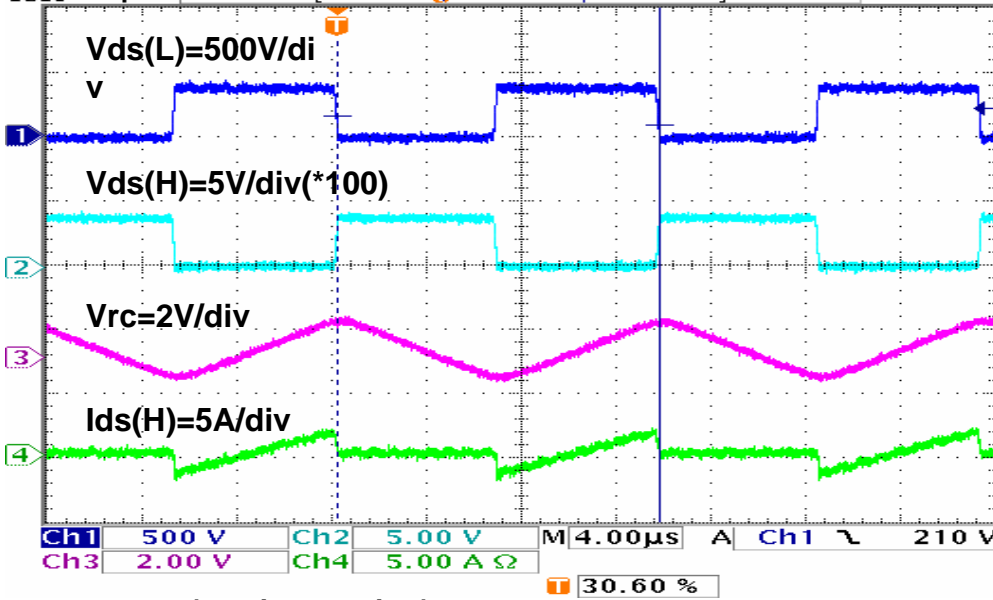




## RC pin waveforms check

No load (24V/0A,12V/0A)

Tek Stop



Δ: 70.0 V  
@: 80.0 V  
Δ: 73.5kHz  
@: 73.5kHz

Ch1 Max  
430 V

Ch2 Max  
4.40 V

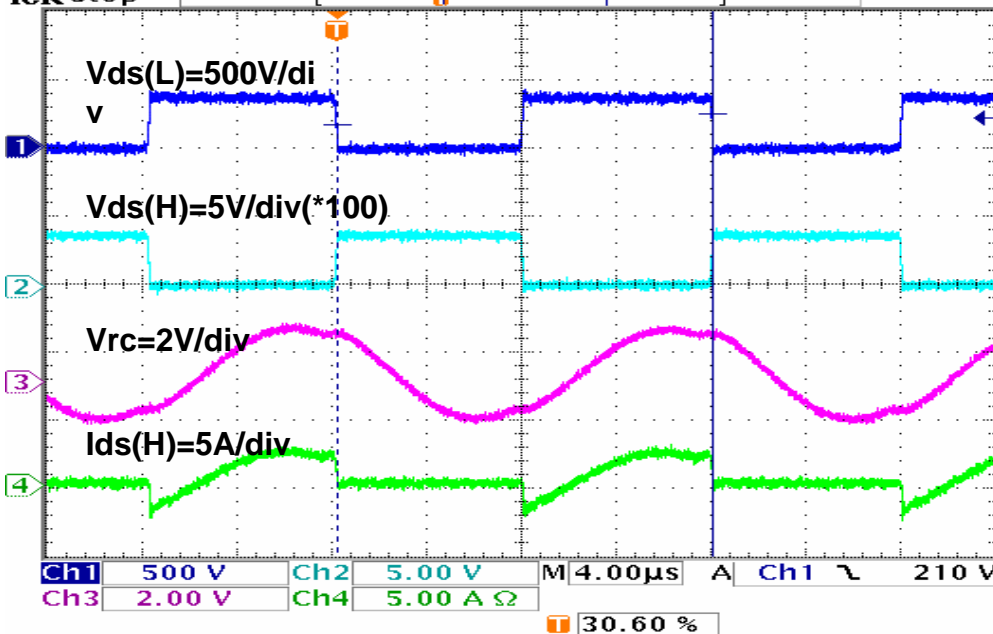
Ch3 Max  
1.28 V

Ch4 Max  
2.10 A

18 Jun 2008  
11:16:23

Max load (24V/6A,12V/3A)

Tek Stop



Δ: 80.0 V  
@: 240 V  
Δ: 63.1kHz  
@: 63.1kHz

Ch1 Max  
420 V

Ch2 Max  
4.30 V

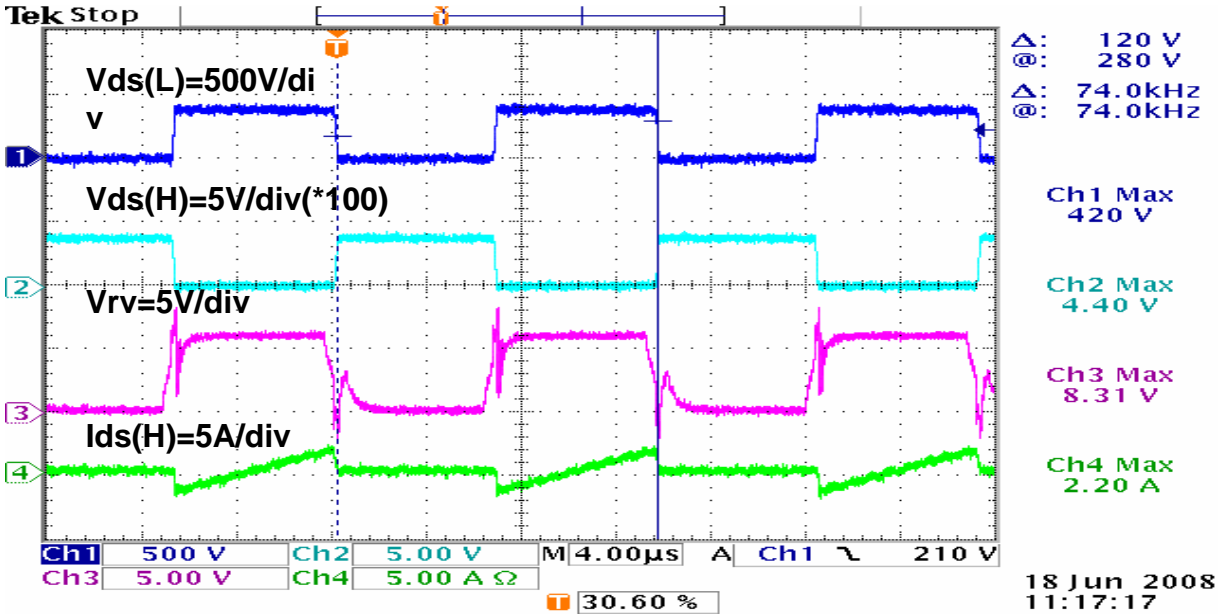
Ch3 Max  
1.72 V

Ch4 Max  
3.00 A

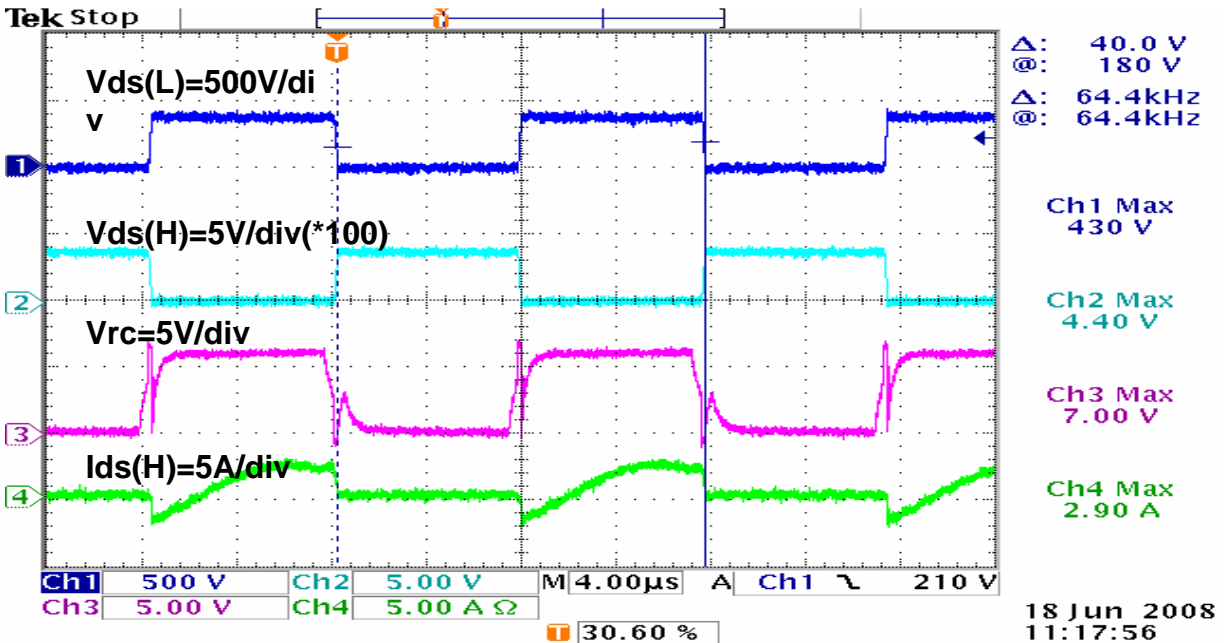
18 Jun 2008  
11:13:46

## RV pin Waveforms check

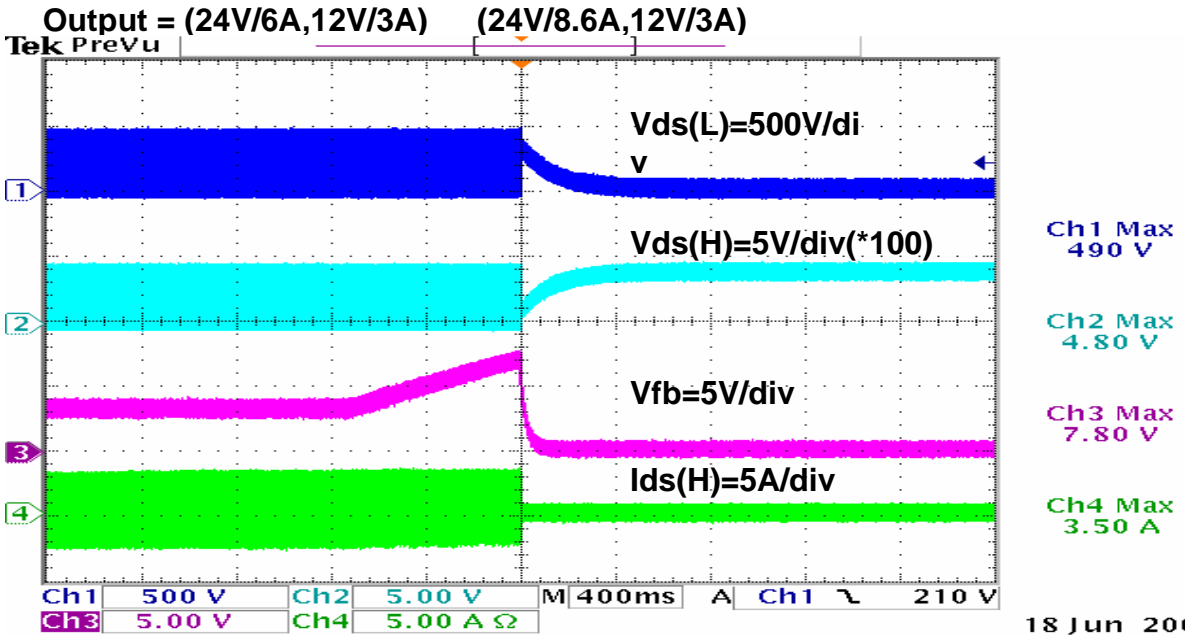
No load (24V/0A,12V/0A)



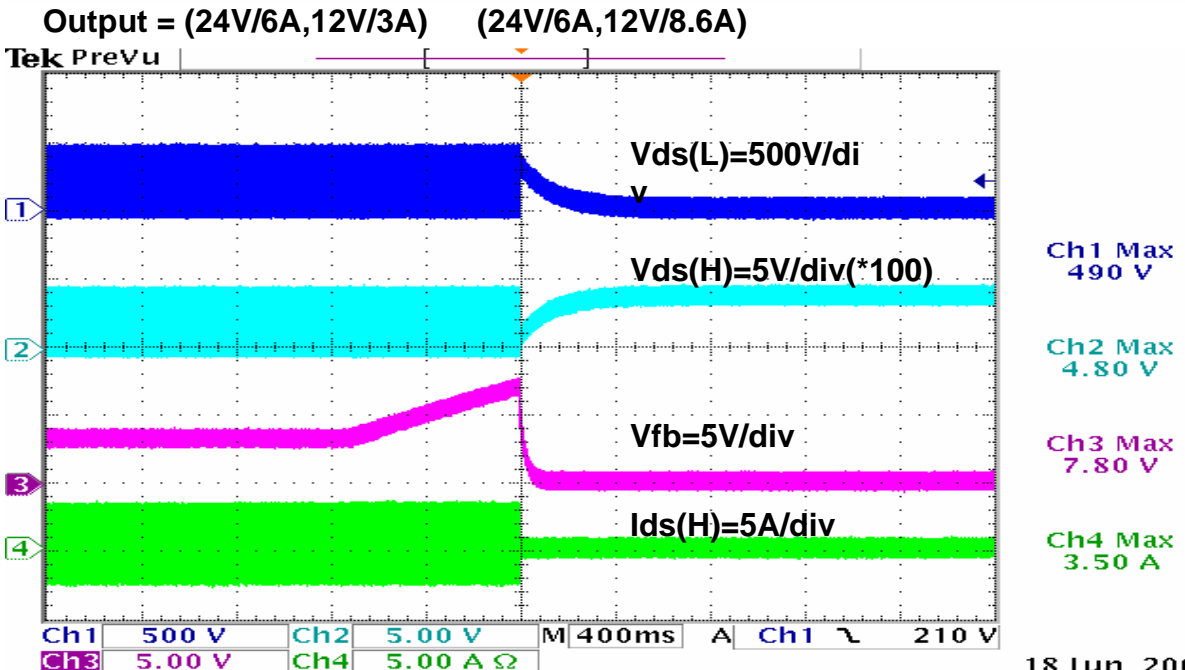
Max load (24V/6A,12V/3A)



### OLP Waveforms check

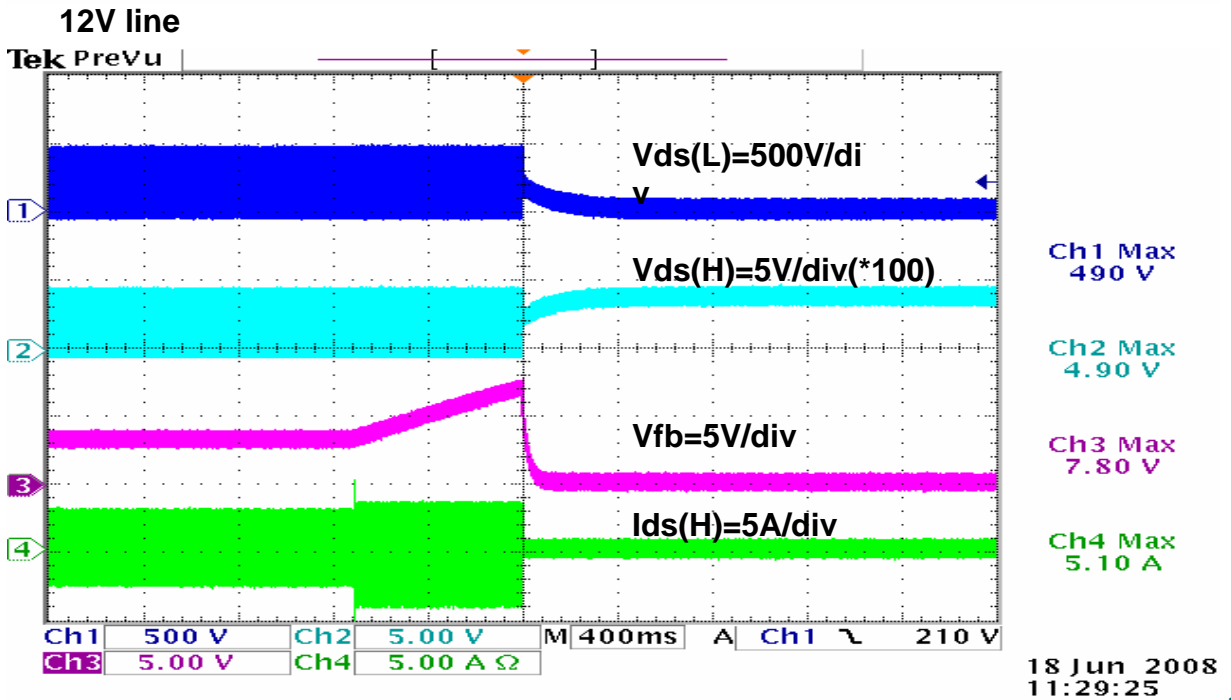
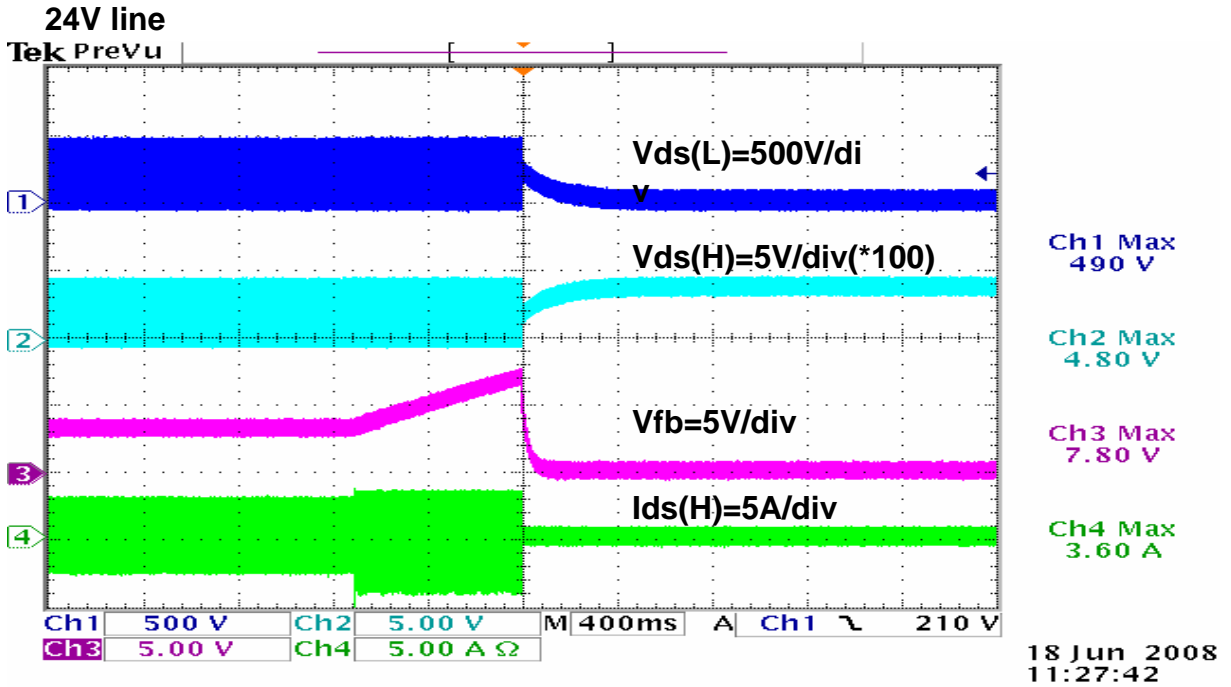


18 Jun 2008  
11:23:28

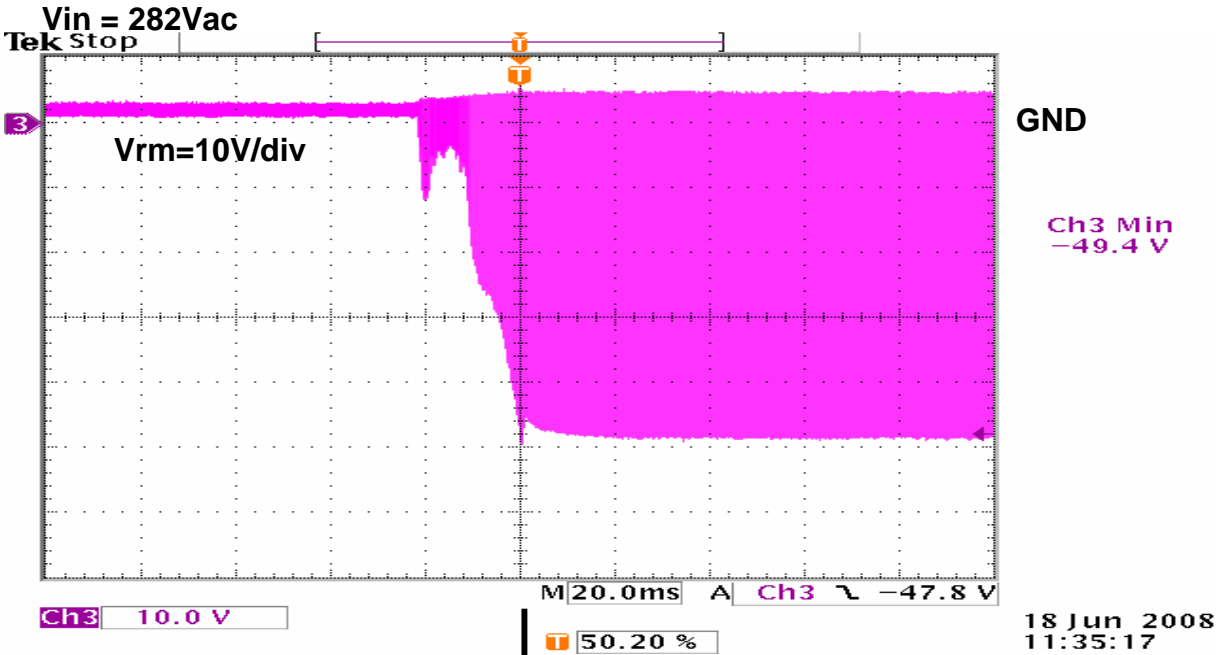


18 Jun 2008  
11:25:21

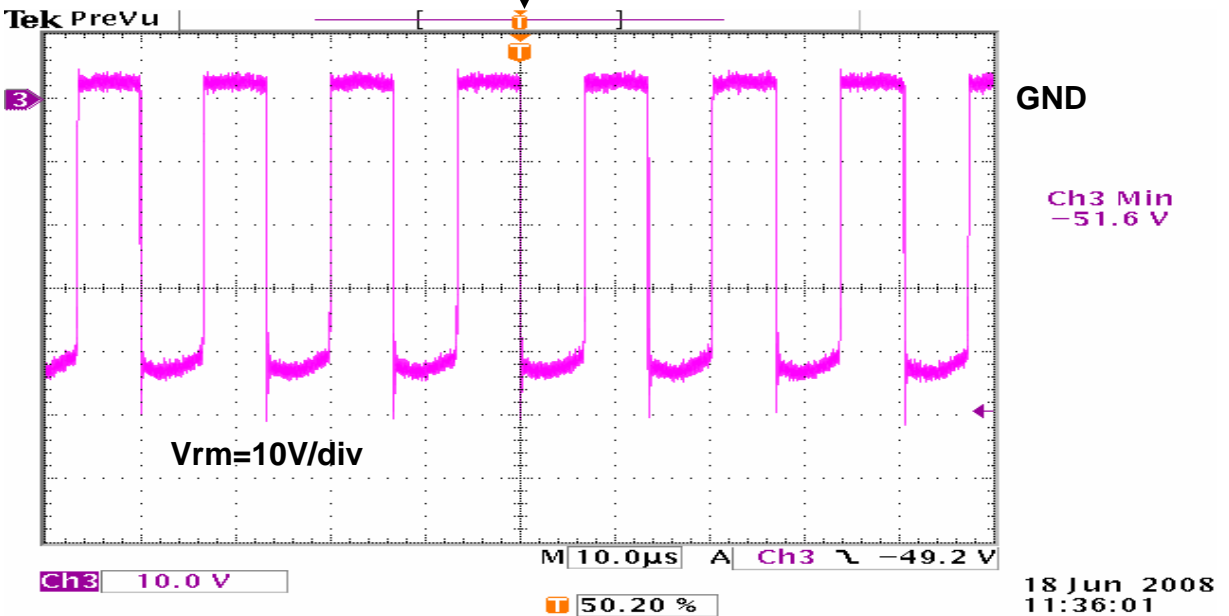
## 2<sup>nd</sup> Capacitor short Waveforms check



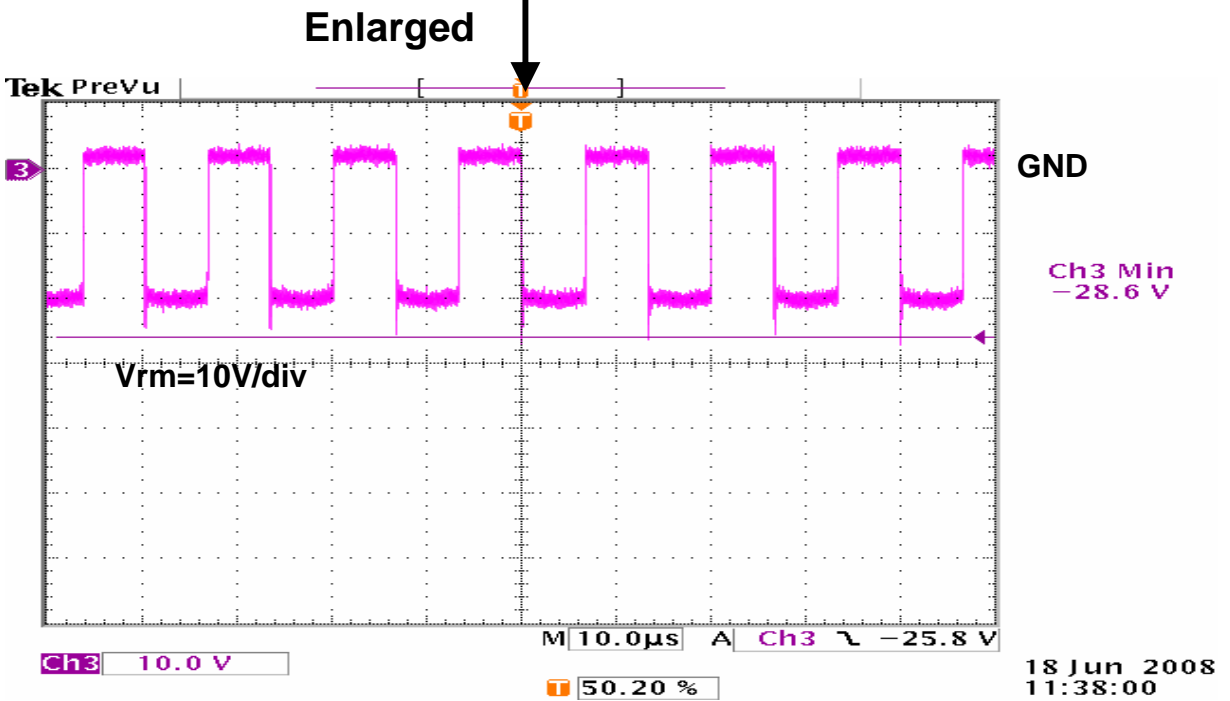
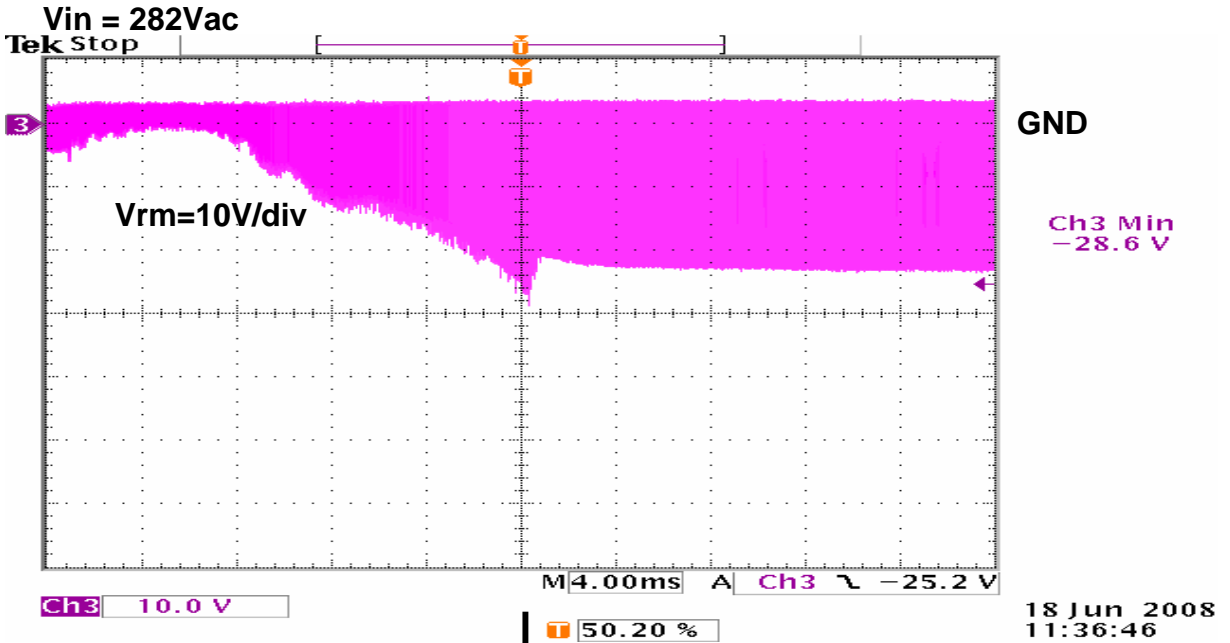
### 24V Vrm Waveforms check



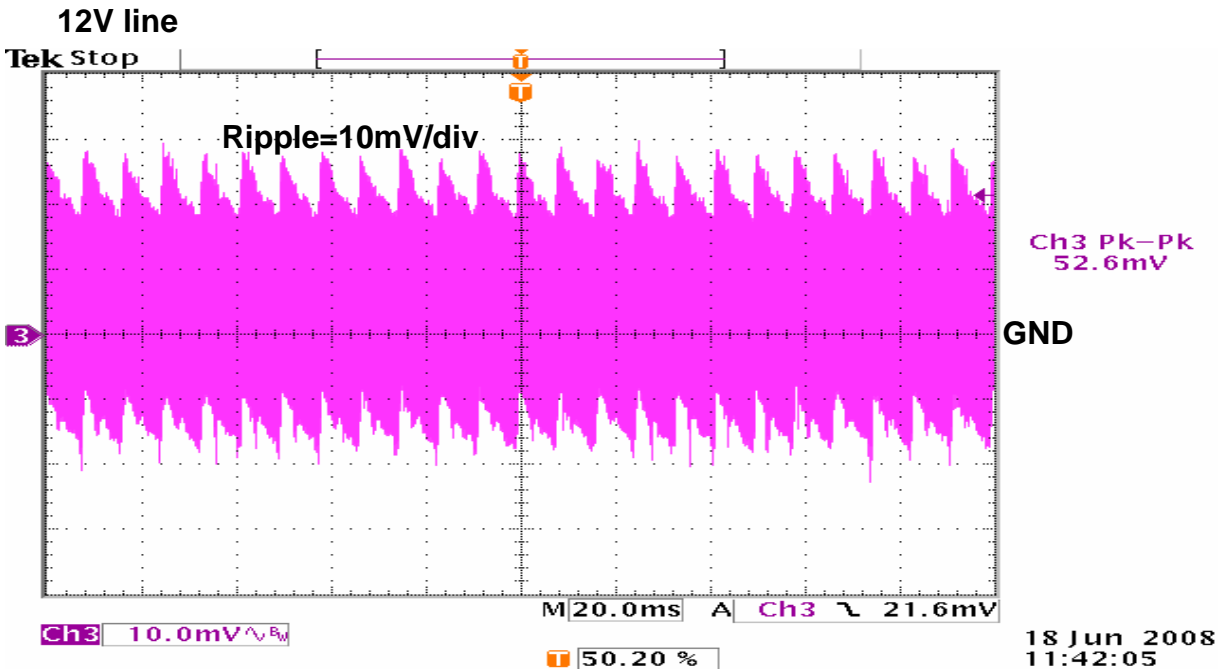
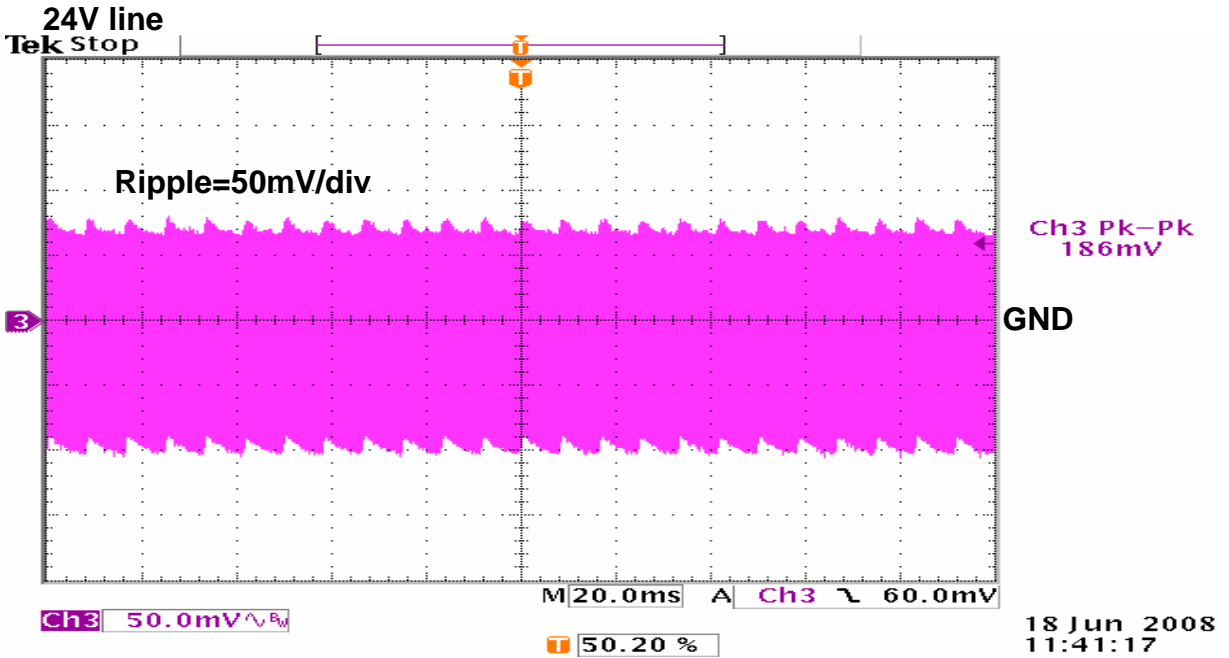
Enlarged



# 12V Vrm Waveforms check



## Output ripple check at Max load



Test condition: 20MHz band width, a 10uF capacitor in parallel with a 0.1uF capacitor.