SSC9502S
Proposal Report

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

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Contents

Efficiency & Temperature Check

Efficiency check

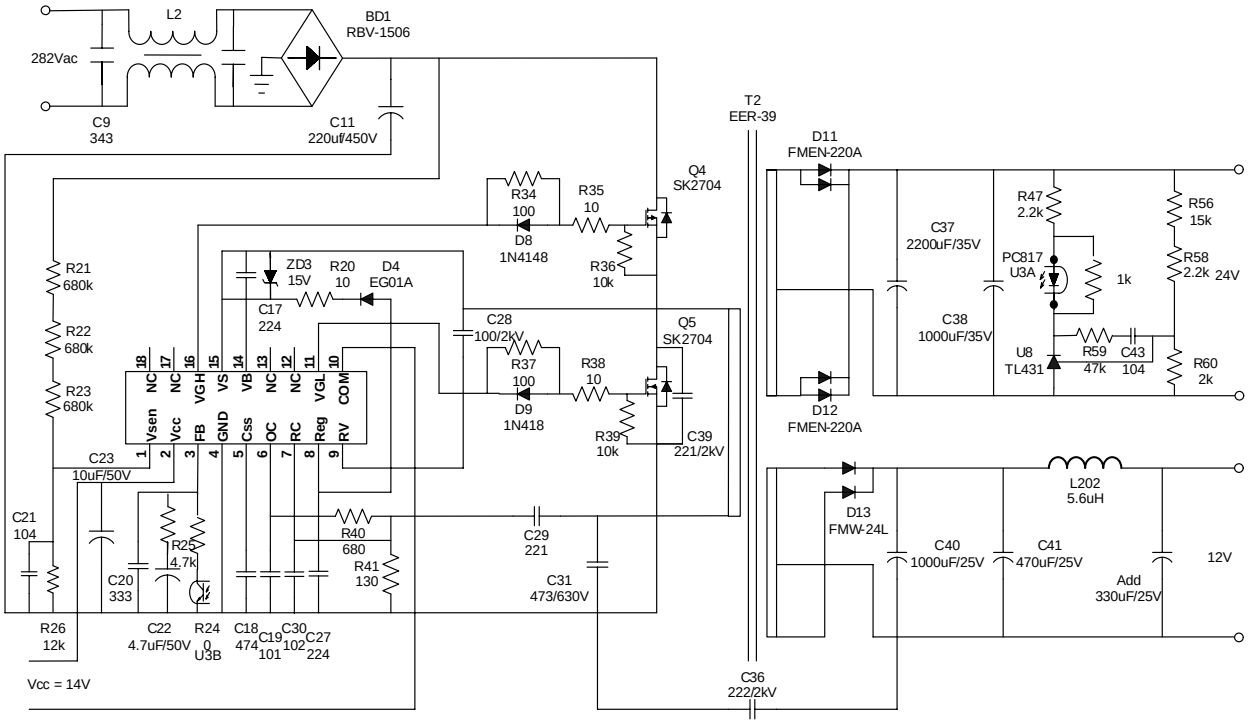
VinAC(V)	VoutDC(V)	Iout (A)	VoutDC(V)	Iout (A)	Pout (W)	Pin (W)	Eff. (%)
	24V		12V				
282	23.99	6	11.73	3	179.13	196.07	91.4

Temperature check

Ta = 25℃

VinAC(V)		282
Bridge Diode(℃)		55
IC bady(℃)		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:

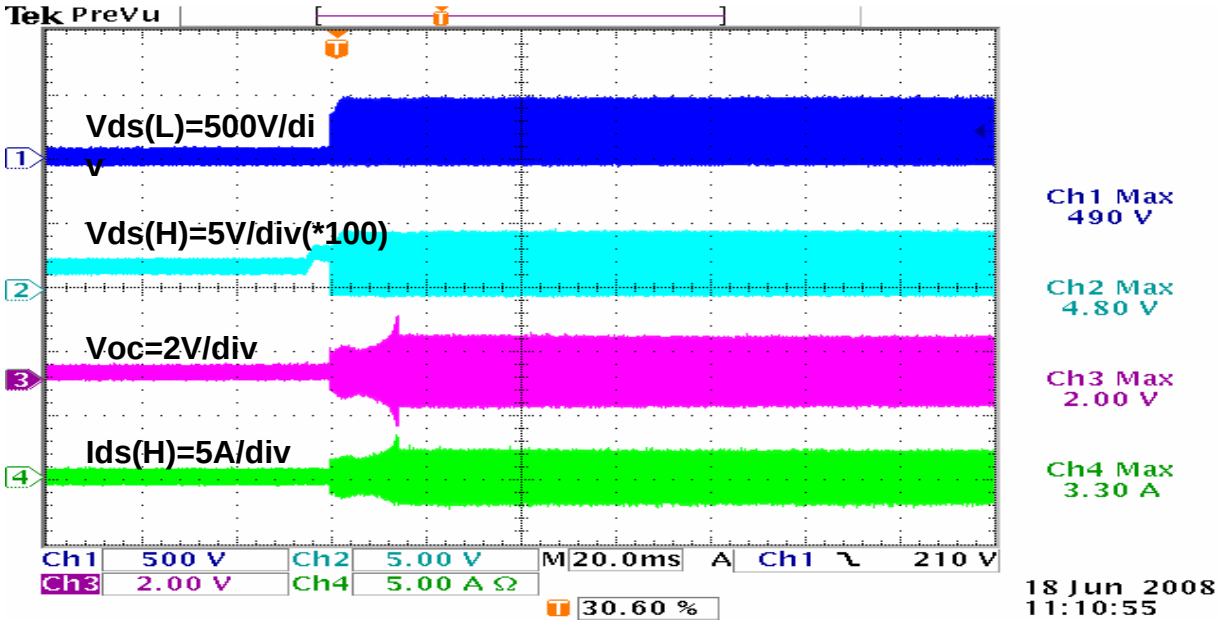
Core: EER-40 Lp : 470uH

Gap: 0.4mm Lr : 107uH

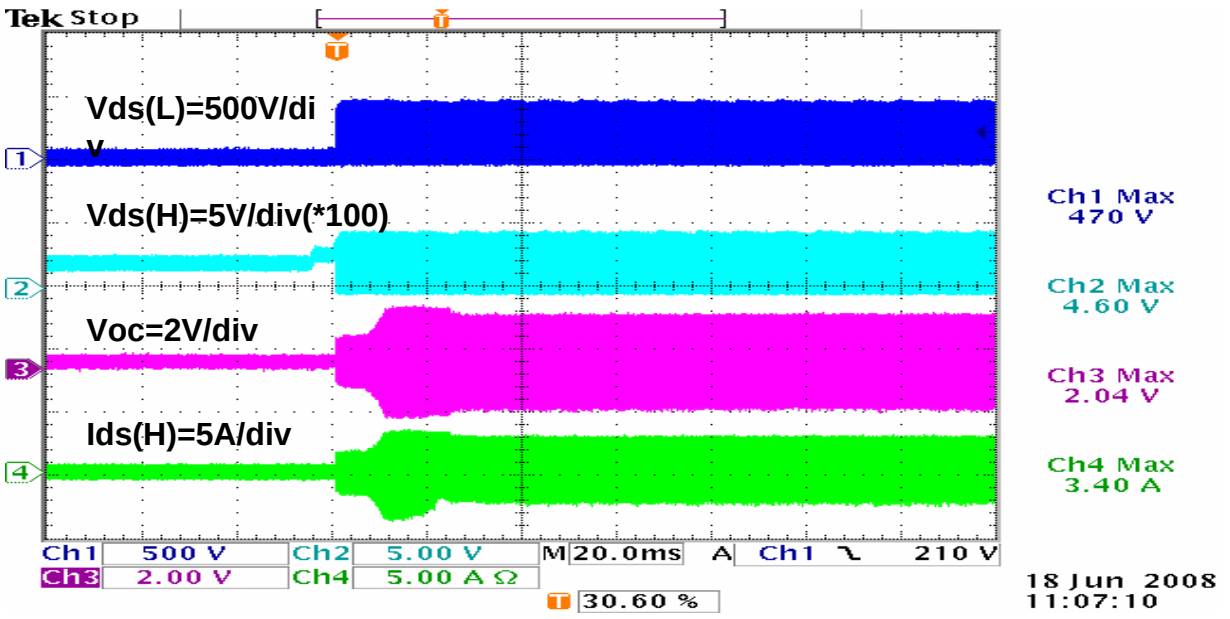
Name		Mark	Turn (T)	Wire (mm)	Winding type
Primary		P1	36	0.1Ø*80	Solenoid
Secondary	24V/6A	S1	4	0.1Ø*120	Solenoid
	12V/3A	S2	4	0.1Ø*80	Solenoid
	24V/6A	S1’	2	0.1Ø*120	Solenoid
	12V/6A	S2’	2	0.1Ø*80	Solenoid

start-up waveforms check

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

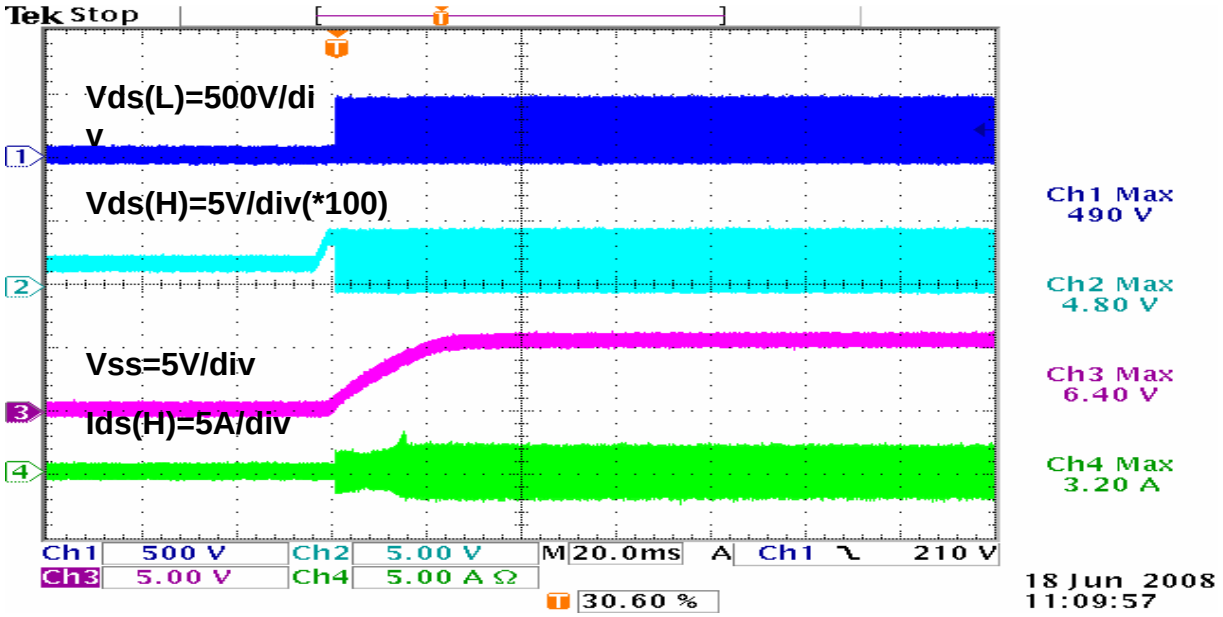


Max load (24V/6A,12V/3A)

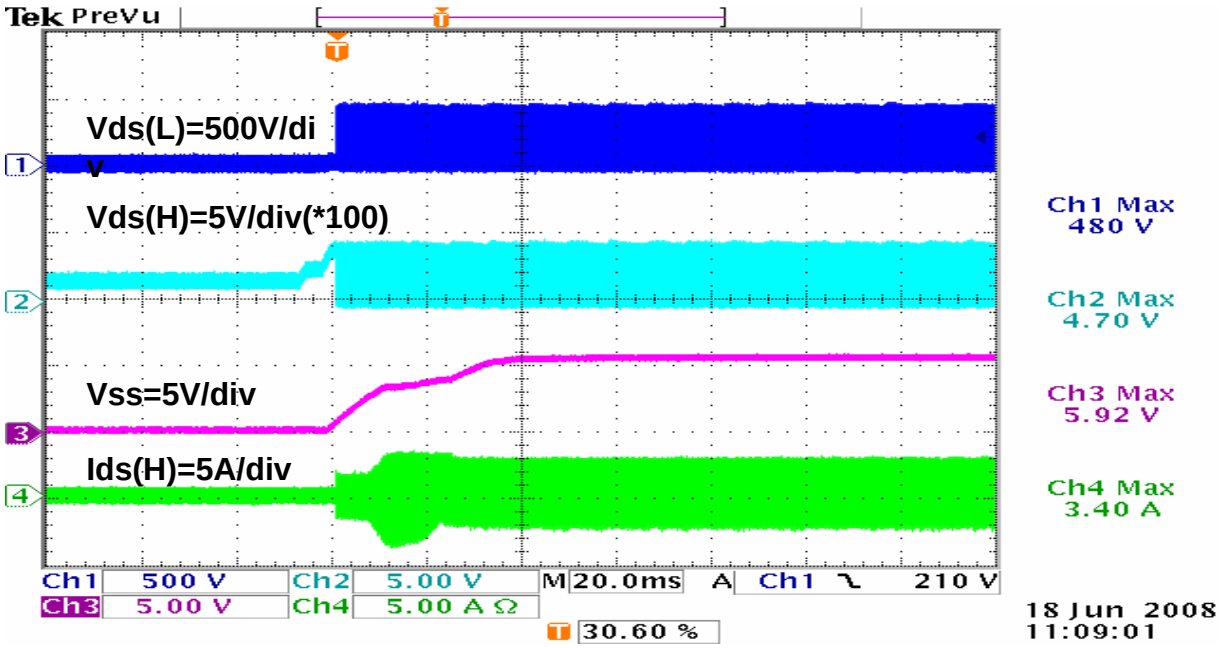


start-up waveforms check

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

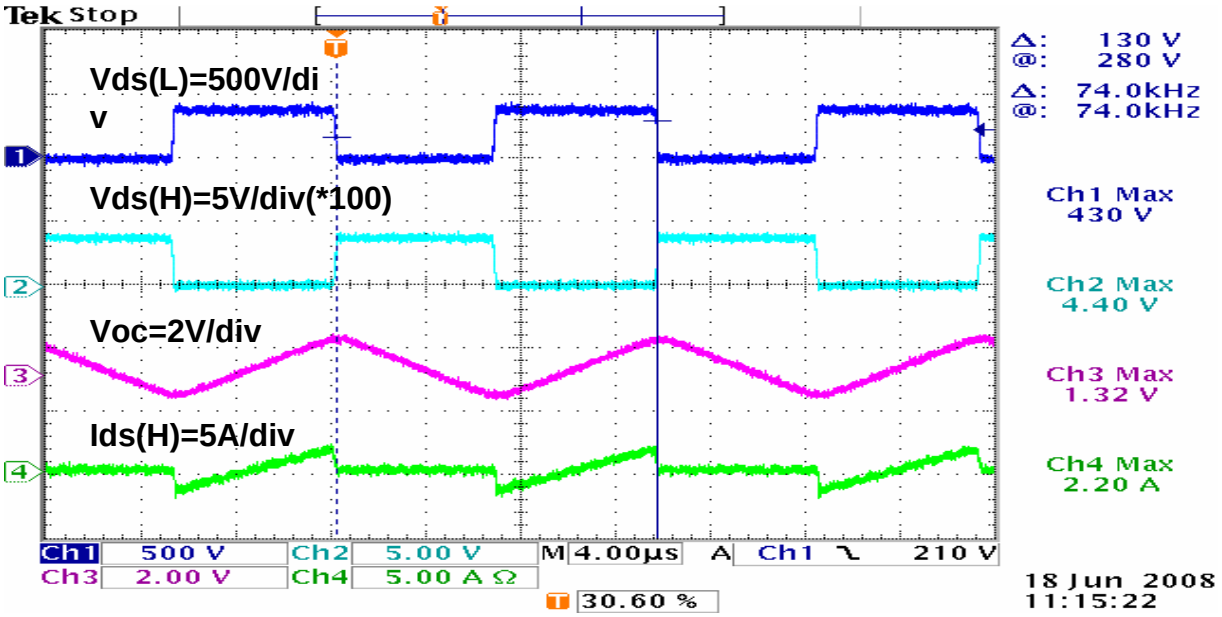


Max load (24V/6A,12V/3A)

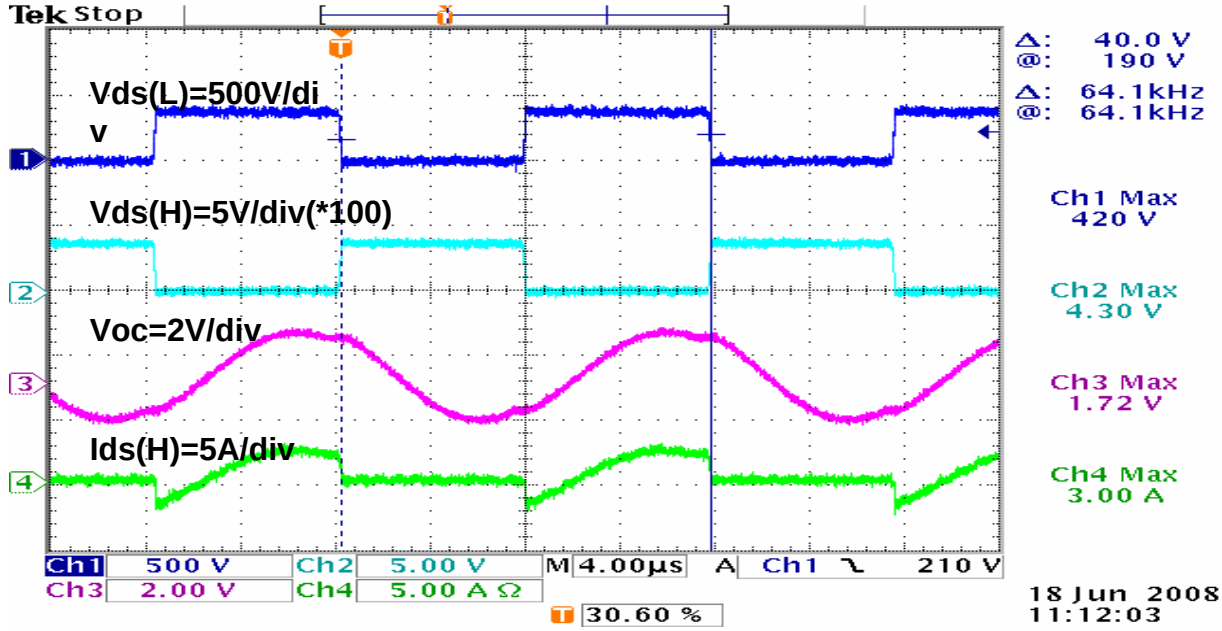


OC pin waveforms check

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

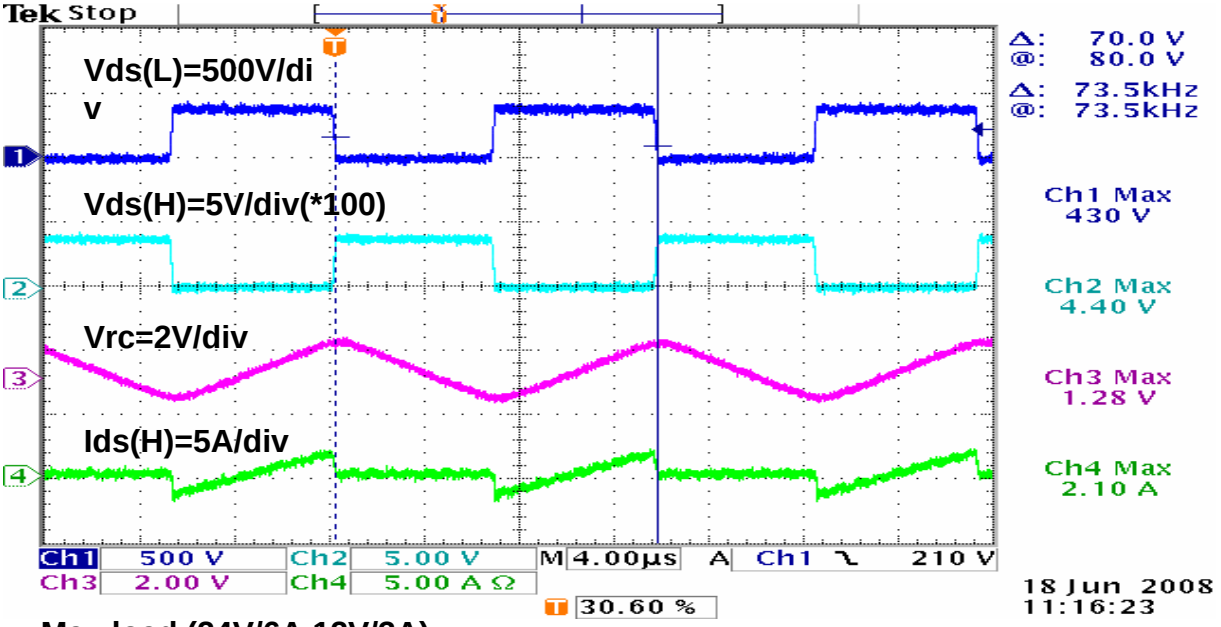


Max load (24V/6A,12V/3A)

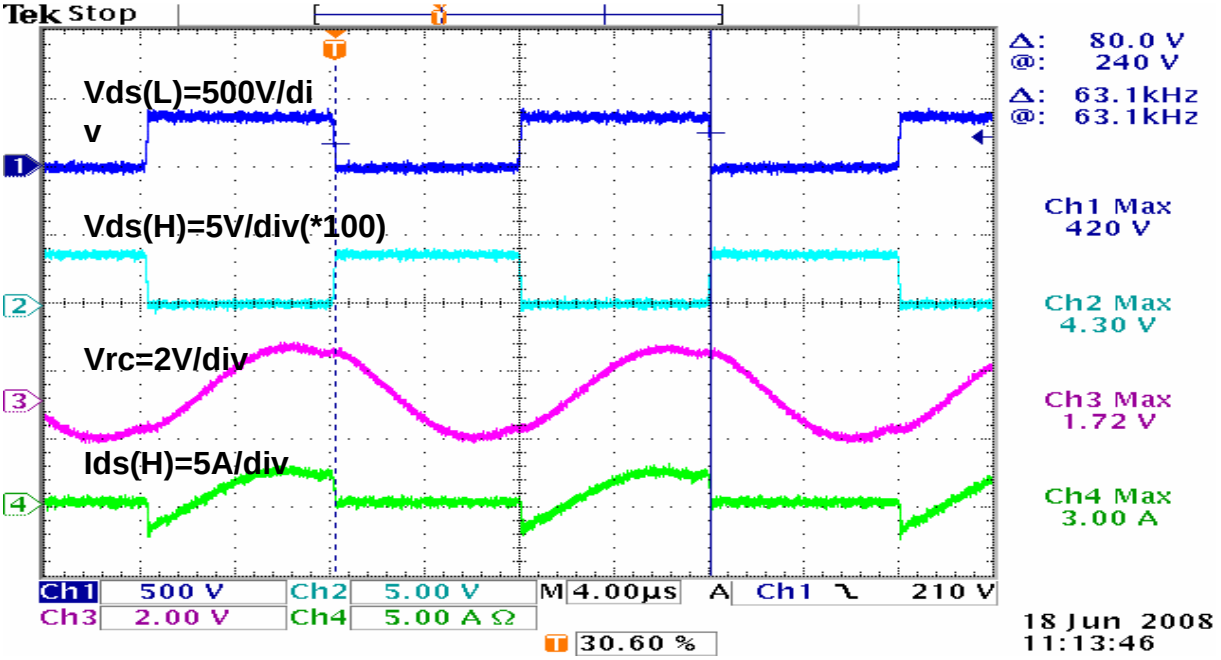


RC pin waveforms check

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

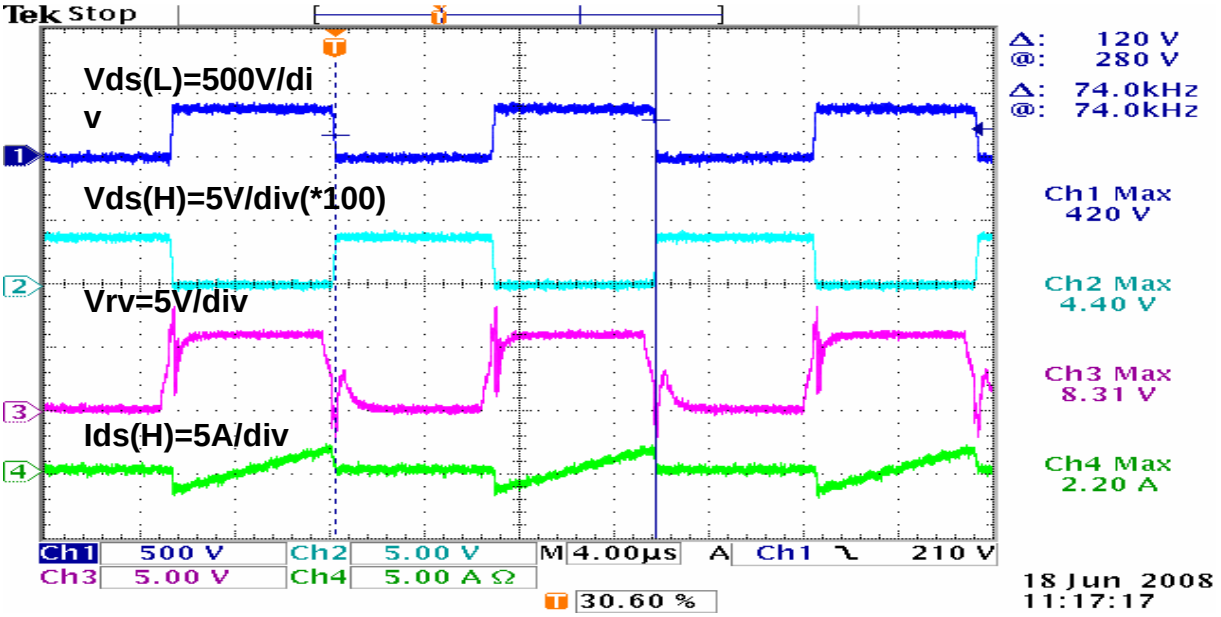


Max load (24V/6A,12V/3A)

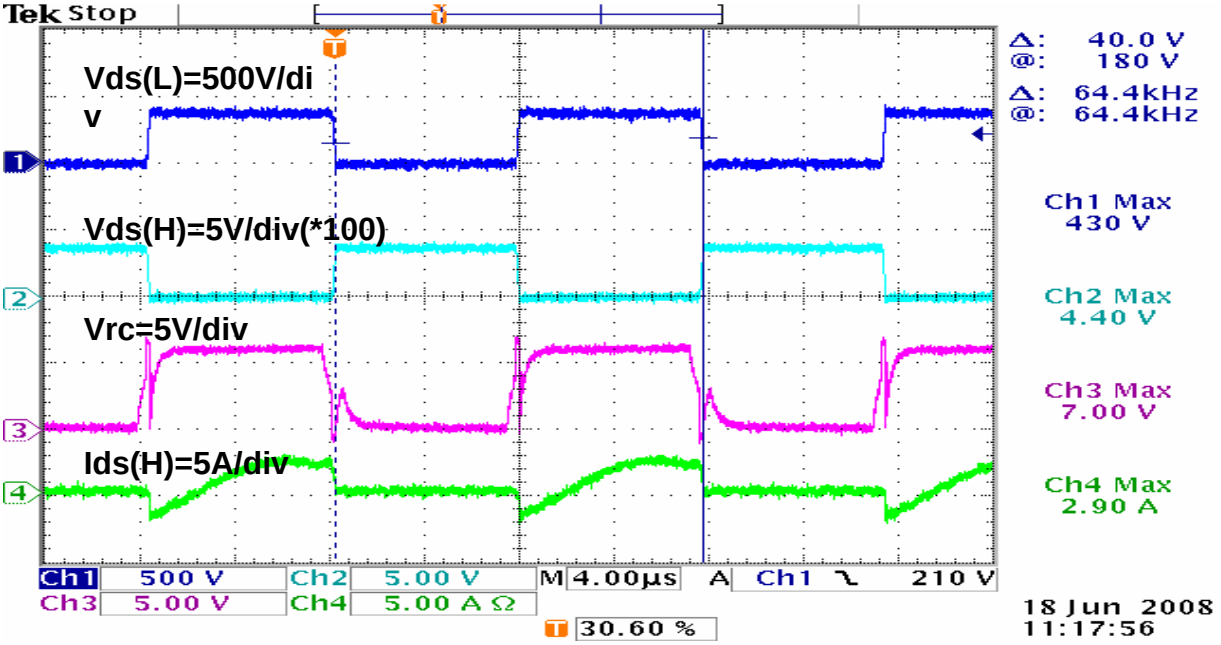


RV pin Waveforms check

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

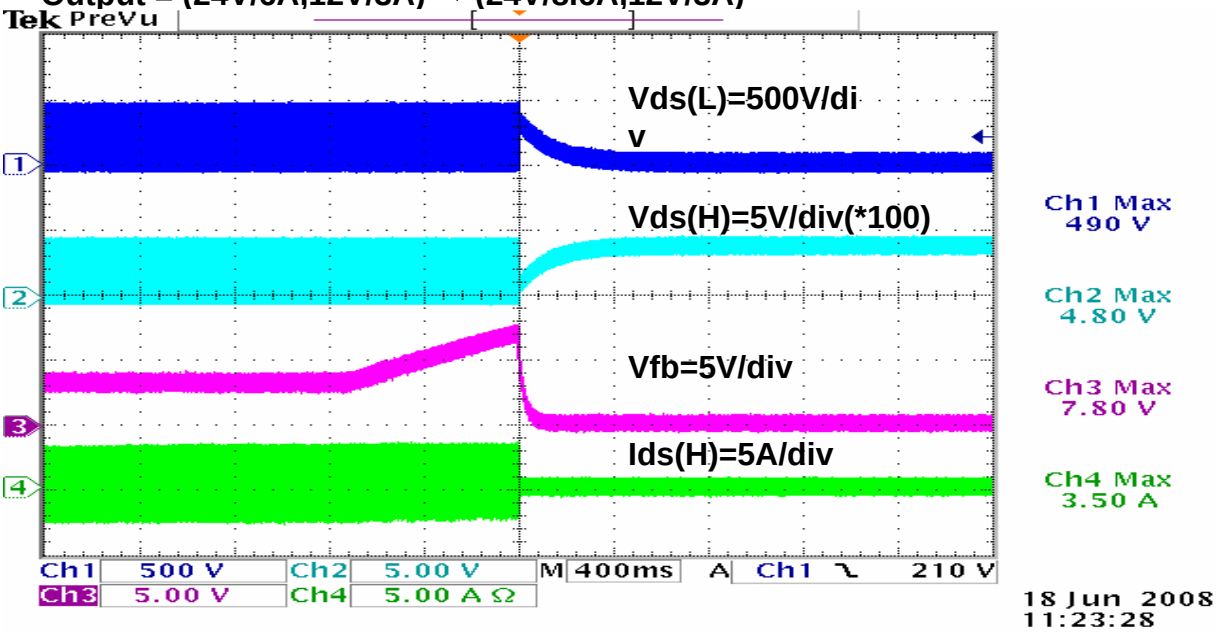


Max load (24V/6A,12V/3A)

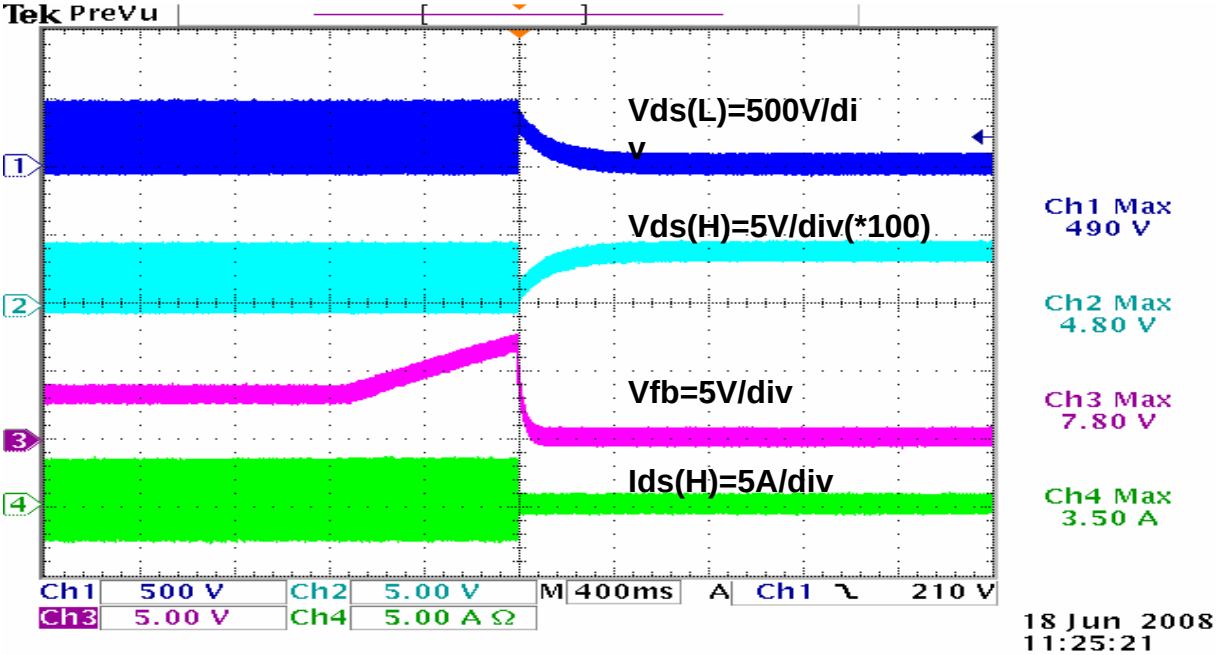


OLP Waveforms check

Output = (24V/6A,12V/3A) → (24V/8.6A,12V/3A)

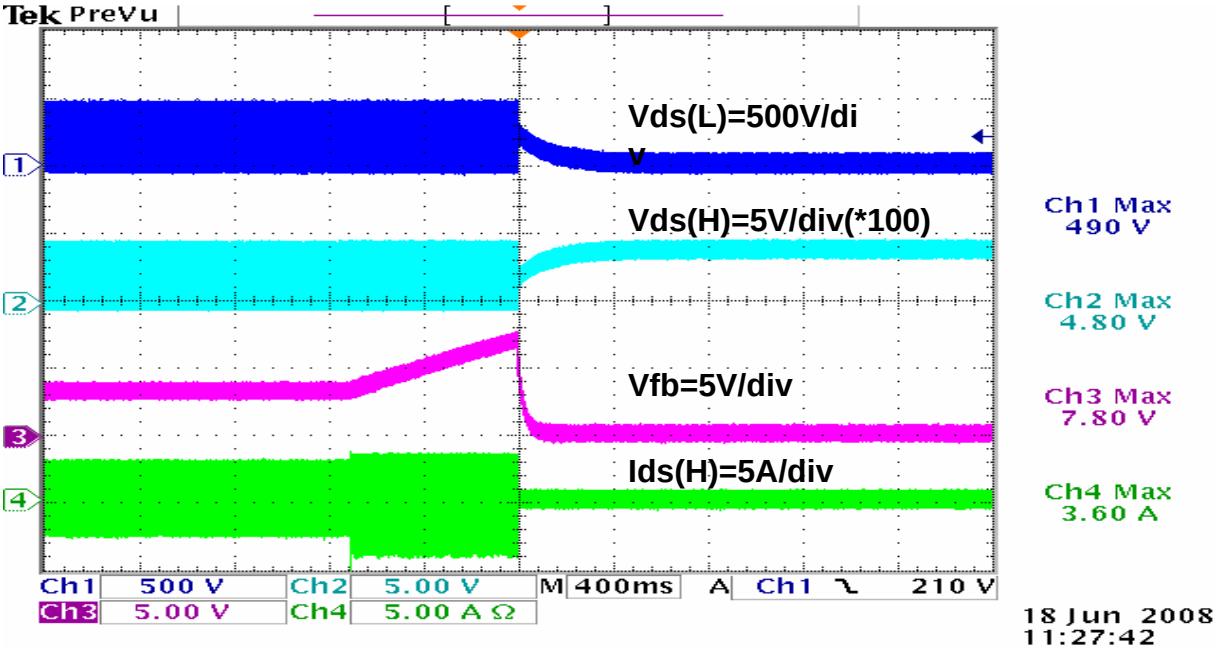


Output = (24V/6A,12V/3A) → (24V/6A,12V/8.6A)

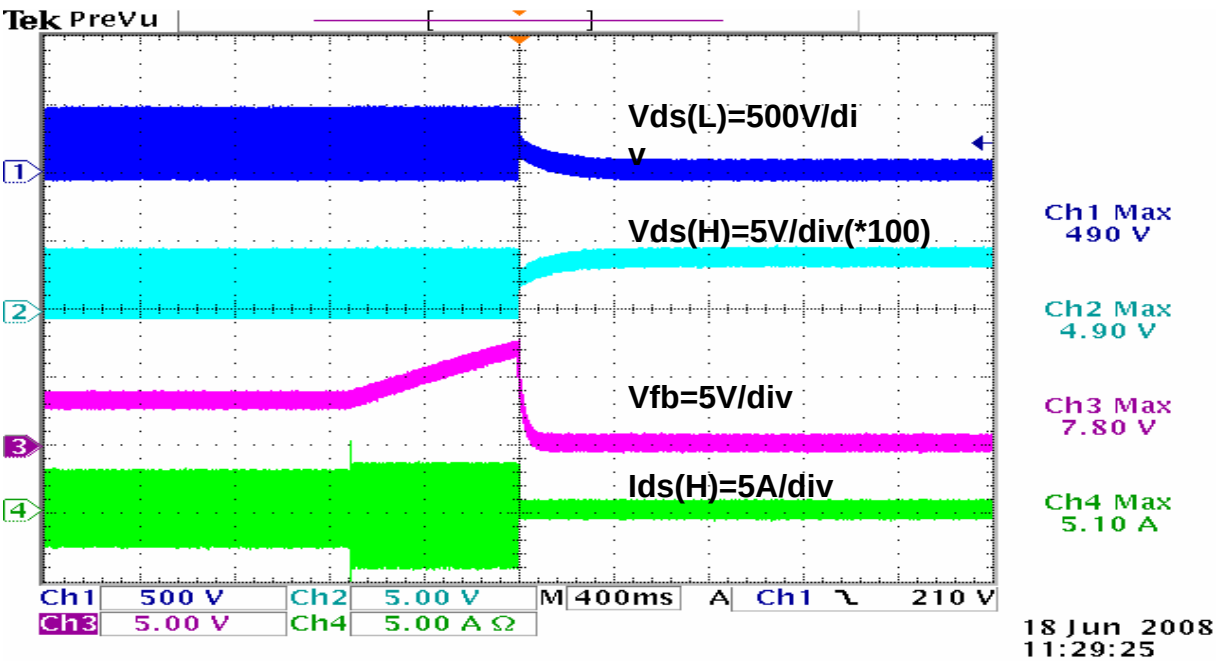


2nd Capacitor short Waveforms check

24V line

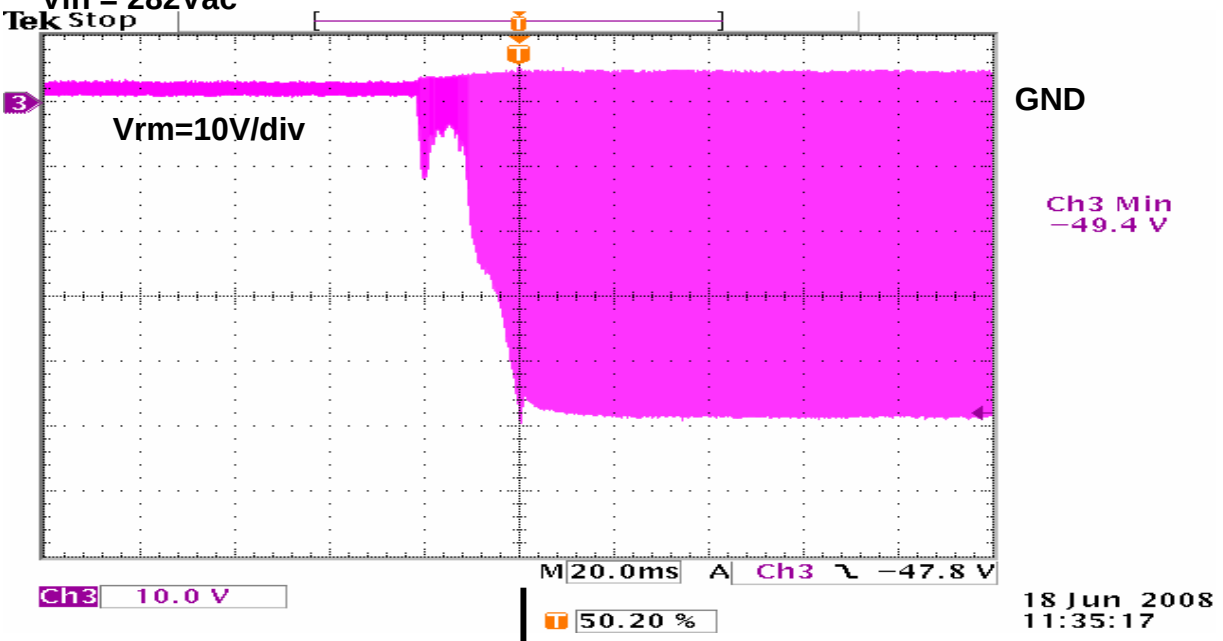


12V line

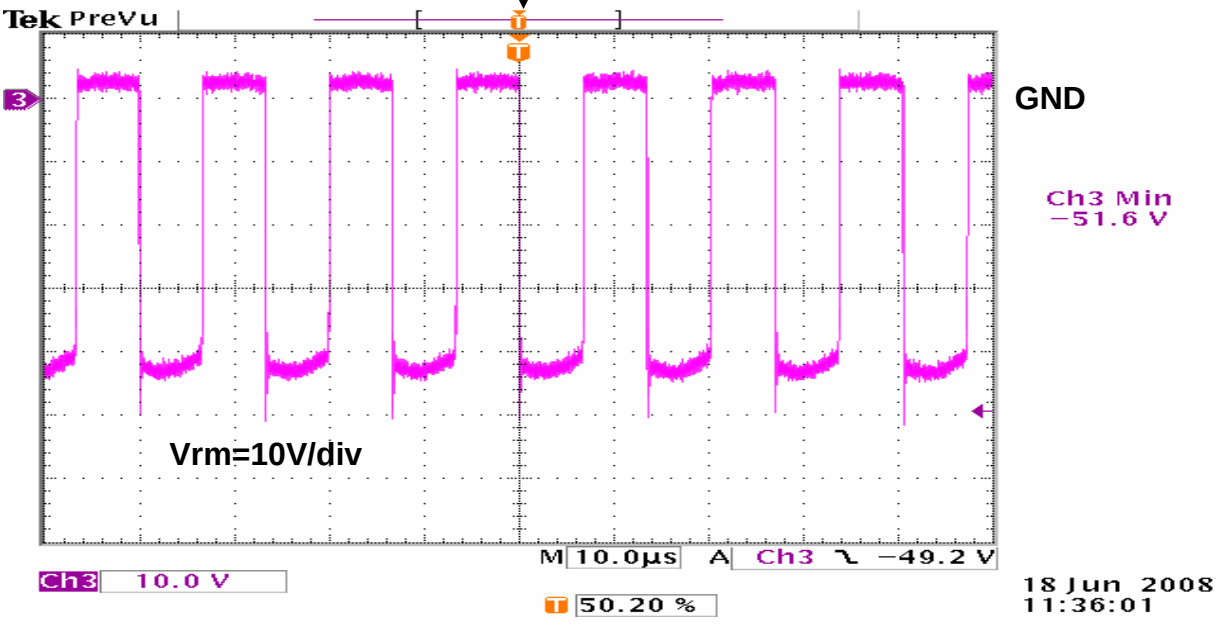


24V Vrm Waveforms check

Vin = 282Vac

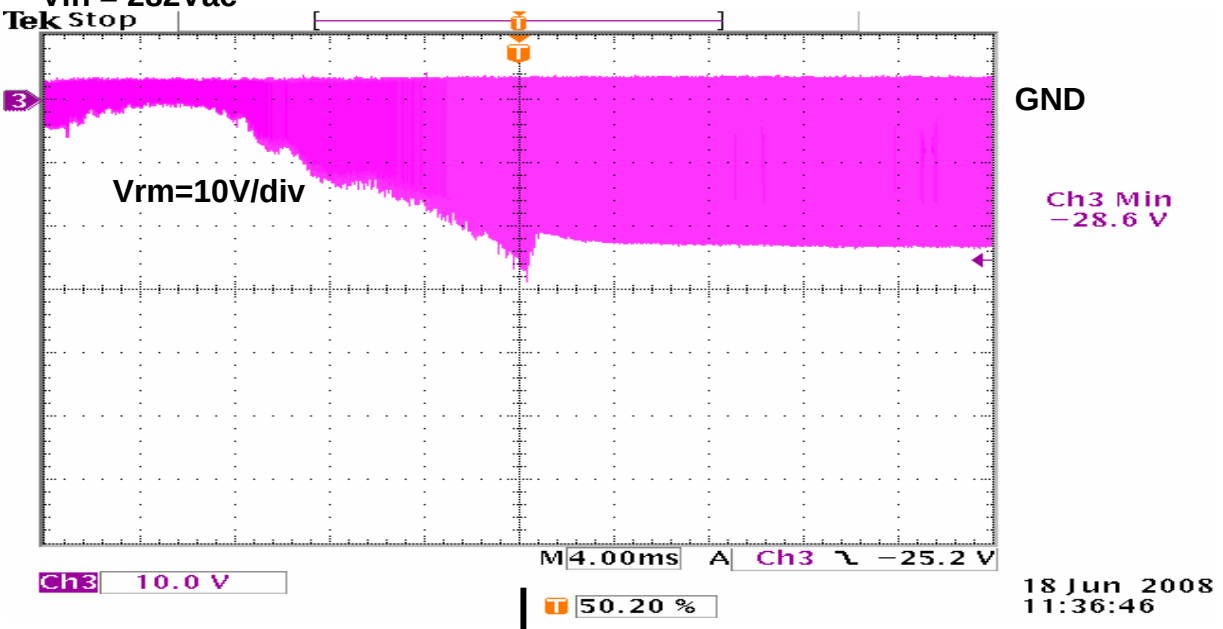


Enlarged

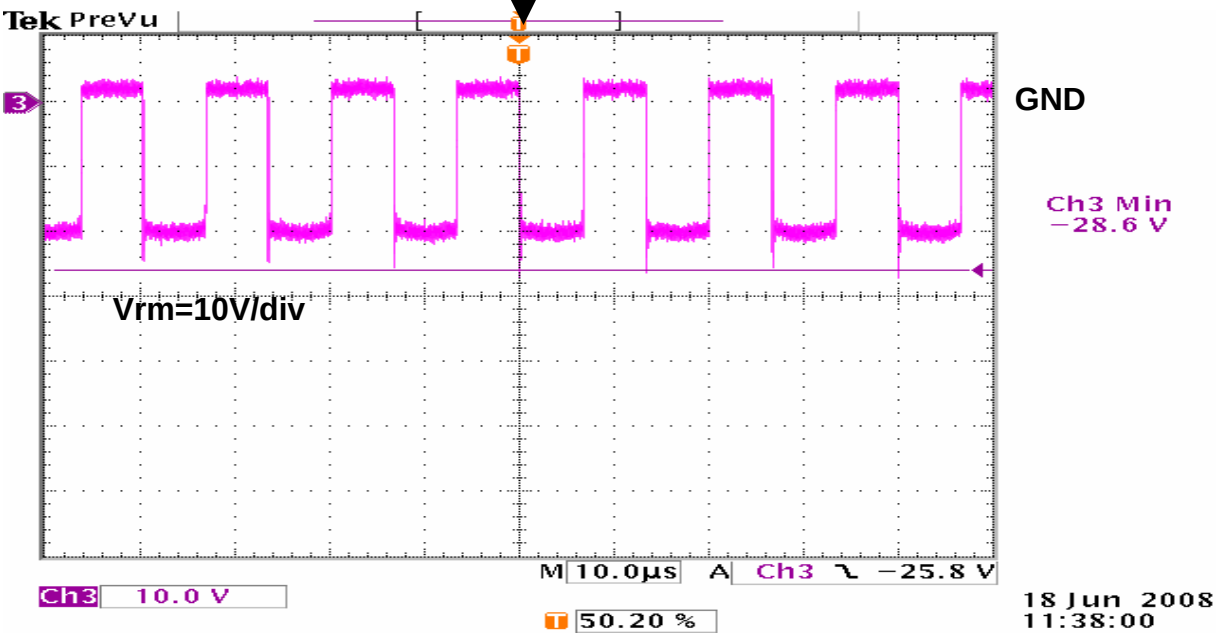


12V Vrm Waveforms check

Vin = 282Vac

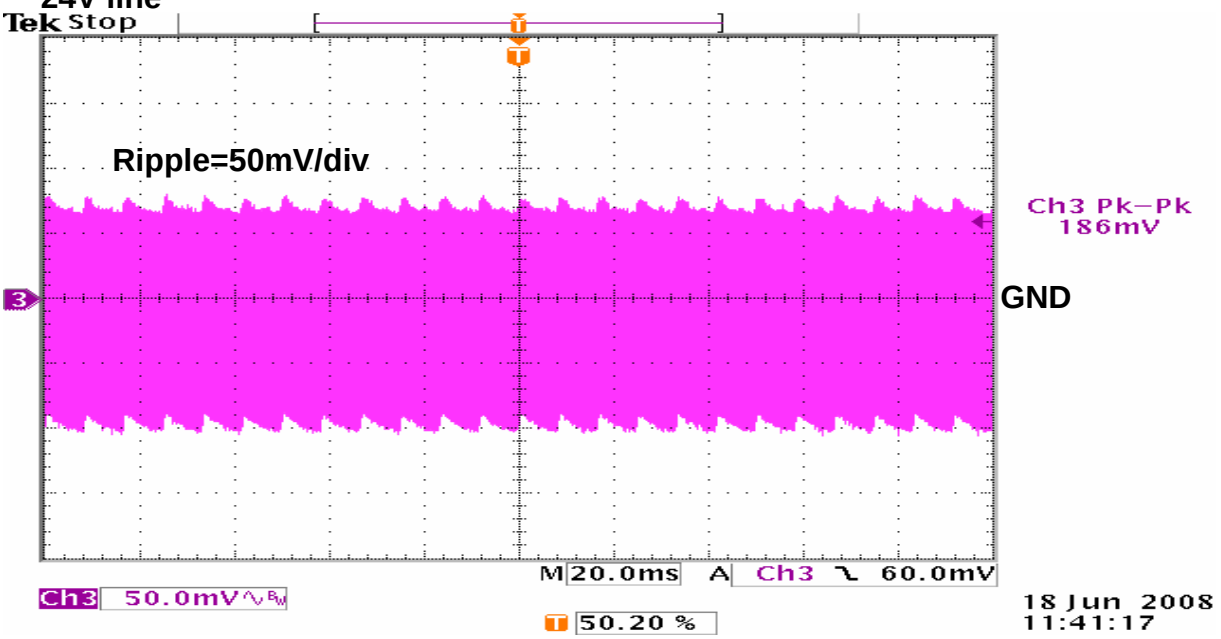


Enlarged

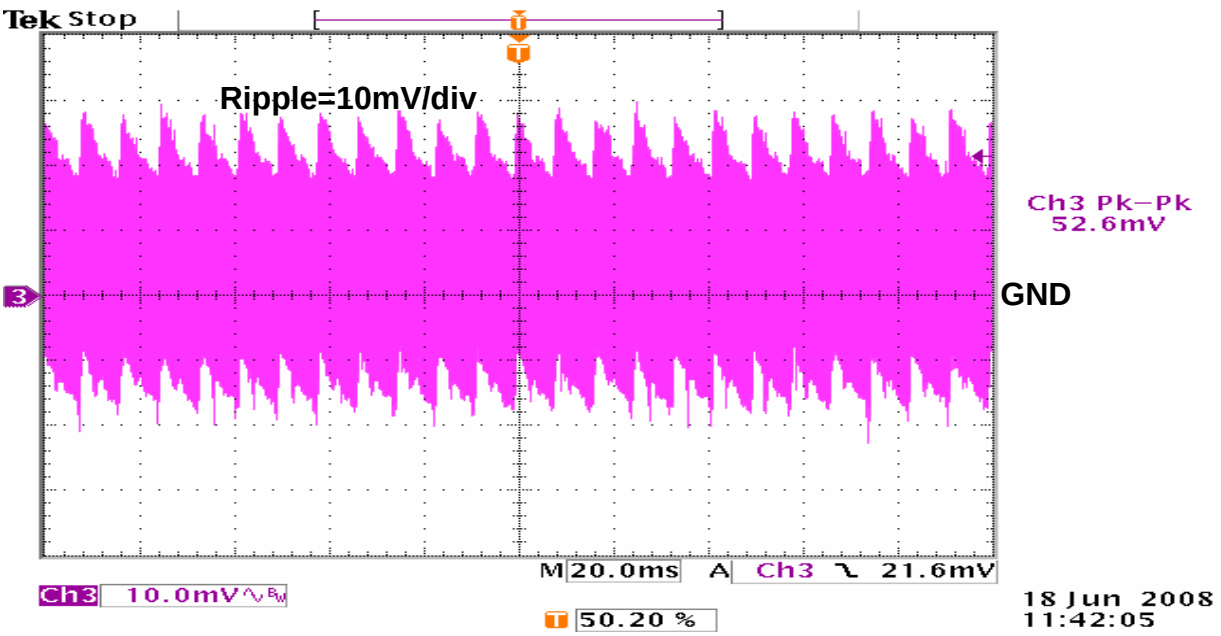


Output ripple check at Max load

24V line



12V line



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