

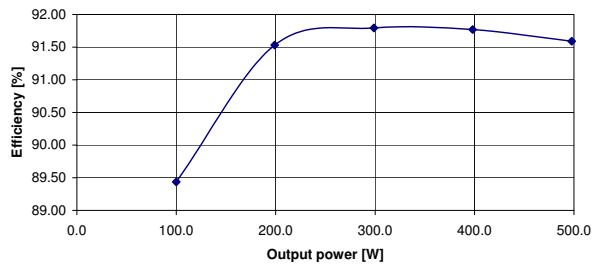
## SMPS004 characterization

MAG 17.12.2011

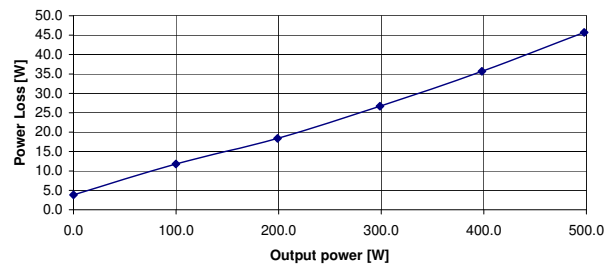
Vin=230VAC

Vout [V]	Iout [A]	Pin [W]	Pout [W]	Iin [A]	PF	$\eta$ [%]	Ploss [W]
100.1	0	3.85	0.0	0.08	0.21	0.00	3.9
100.1	0.998	111.7	99.9	0.815	0.596	89.44	11.8
100	1.989	217.3	198.9	1.524	0.624	91.53	18.4
100	2.987	325.4	298.7	2.23	0.63	91.79	26.7
99.9	3.985	433.8	398.1	3.06	0.636	91.77	35.7
99.9	4.983	543.5	497.8	3.73	0.65	91.59	45.7

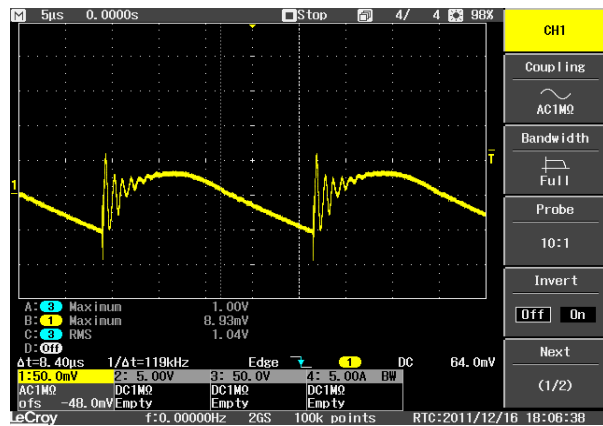
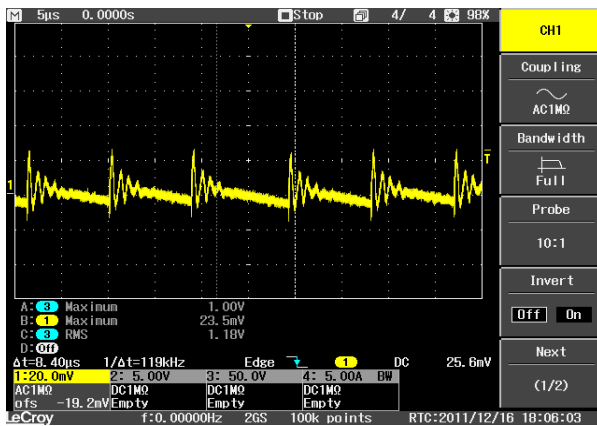
Efficiency vs output power @ 230VAC



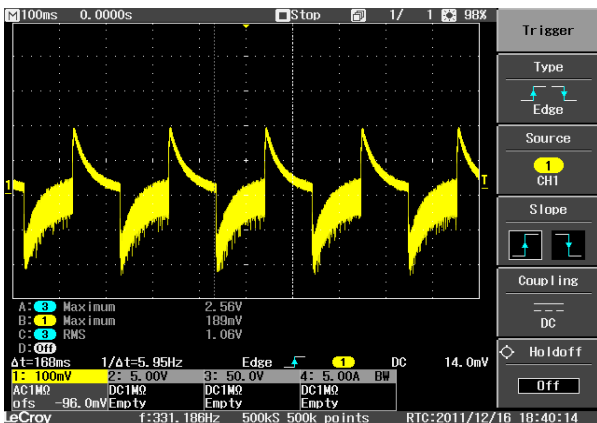
Power loss vs output power @ 230VAC



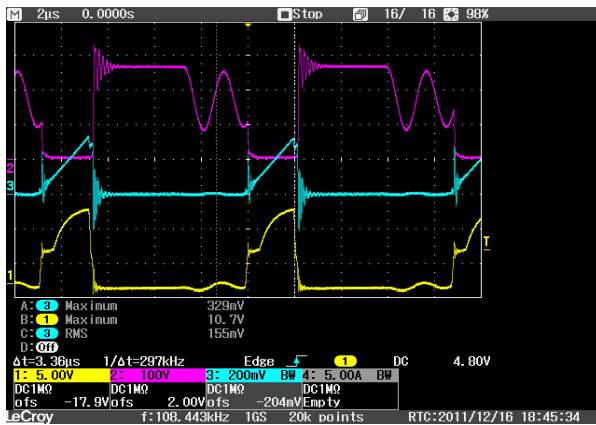
## Output ripple and noise



## Transient response



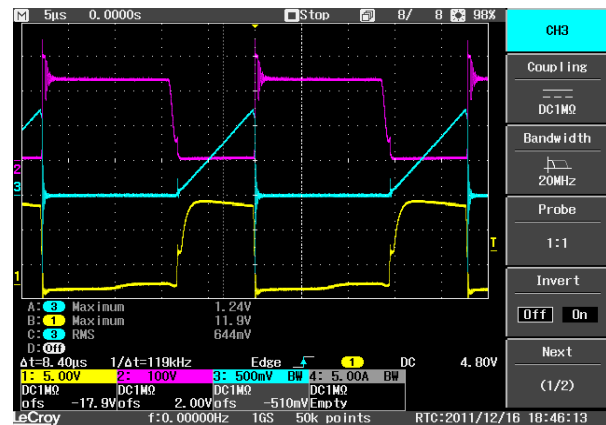
## Switching waveforms



Low side MOSFET drain, gate and current at 100W (1A) load  
 note: the current is measured using the voltage drop across the shunt (Rshunt=0.125R)

Yellow: Vgs - 5V/div  
 Pink: Vds - 100V/div  
 Blue: Id - 1.6A / div  
 X-axis: 2µsec/div

Idpeak: 2.63A  
 Vds\_ON:100V  
 Fswitch: 108kHz



Low side MOSFET drain, gate and current at 500W (5A) load  
 note: the current is measured using the voltage drop across the shunt (Rshunt=0.125R)

Yellow: Vgs - 5V/div  
 Pink: Vds - 100V/div  
 Blue: Id - 4A / div  
 X-axis: 5µsec/div

Idpeak: 9.9A  
 Vds\_ON:56V  
 Fswitch: 49kHz