

1. Startup

The output voltage at startup is shown in the images below. Input voltage was set to 5V. The output was unloaded for the upper image and loaded with a 0.5A load for the lower one.

Channel 1: Input voltage (2 V/div, 4msec/div).

Channel 3: Output voltage (2V/div).



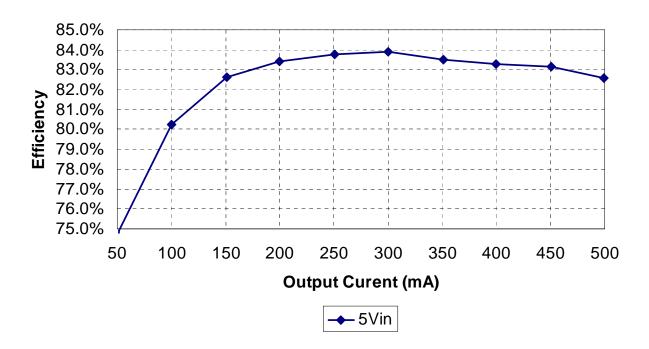




2. Efficiency

The efficiency data is shown in the tables and graph below.

The measurements were taken at 5Vin.

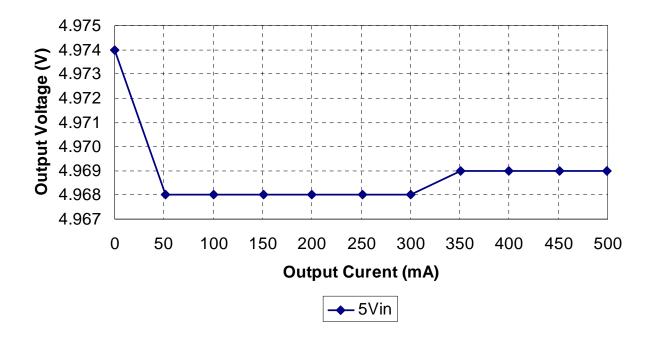


lout	vout	Pout	IIN	vin	PIN	Ploss	
(mA)	(V)	(W)	(mA)	(V)	(W)	(W)	Eff
0.0	4.974	0.00	1.6	5.06	0.008	0.008	0.0%
51.3	4.968	0.25	67.9	5.01	0.340	0.085	74.9%
100.0	4.968	0.50	123.8	5.00	0.619	0.122	80.3%
151.2	4.968	0.75	181.8	5.00	0.909	0.158	82.6%
199.8	4.968	0.99	237.1	5.02	1.190	0.198	83.4%
251.1	4.968	1.25	297.2	5.01	1.489	0.242	83.8%
299.8	4.968	1.49	355.1	5.00	1.776	0.286	83.9%
351.0	4.969	1.74	417	5.01	2.089	0.345	83.5%
399.6	4.969	1.99	476	5.01	2.385	0.399	83.3%
450.9	4.969	2.24	539	5.00	2.695	0.454	83.1%
499.5	4.969	2.48	601	5.00	3.005	0.523	82.6%



3. Output Voltage Regulation

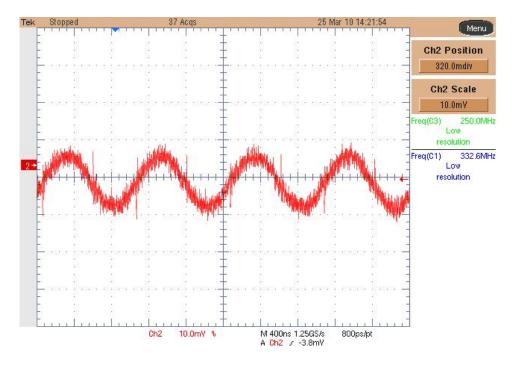
The output voltage regulation versus output load plot is shown below.

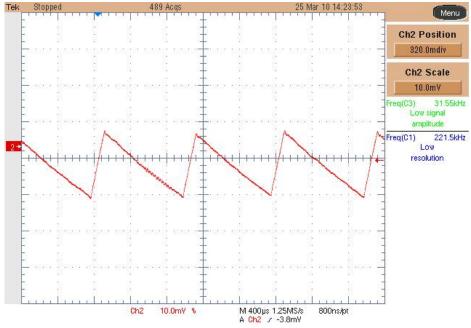




4. Output Ripple Voltage

The ripple voltage waveforms measured at the terminal blocks are shown in the plots below. The input was set to 5Vin, full load for the upper picture and no load for the lower one. Channel 2: Output voltage (10 mV/div, 400nsec/div, AC coupled, full bandwidth).



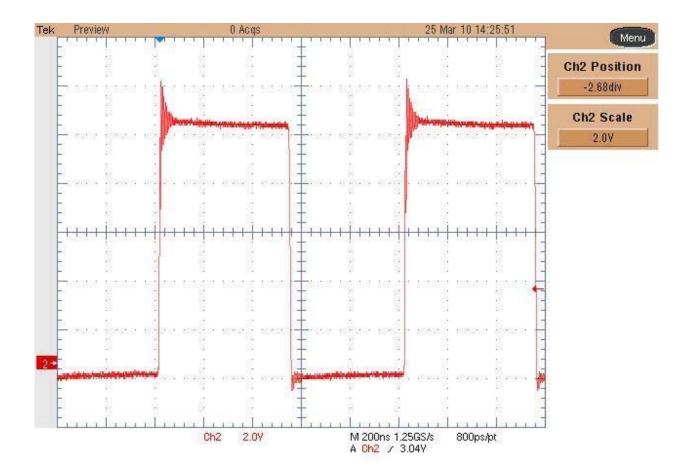




5. Switch-node

The image below shows the switch-node waveform. The input was set to 5V while the output was fully loaded.

Channel 2: "PH" pin, (2V/div, 200nsec/div), no bandwidth reduction.



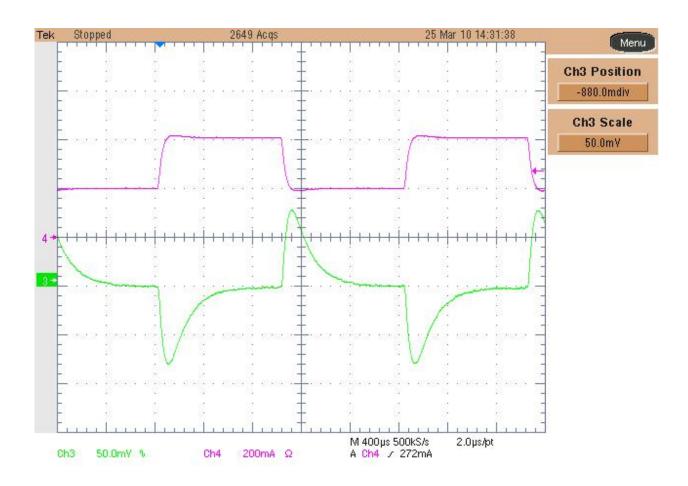


6. Transient Response

The image below shows the transient behavior. The input voltage was set to 5V and the load switched between 50% and 100% of the nominal value.

Channel 3: Output Voltage (50mV/div, 400usec/div)

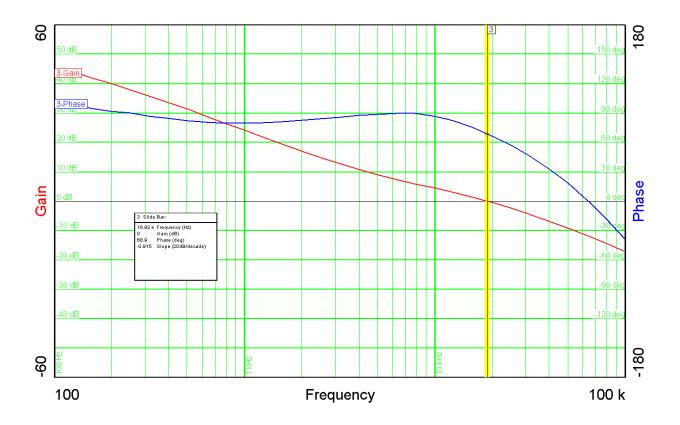
Channel 4: Output Current (200mA/div)





7. Loop Response

The image below shows the loop response of the converter measured with a 5Vdc input at full load (500mA, -5V). Phase margin is 68.9 deg. and crossover frequency is 18.92 KHz.



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