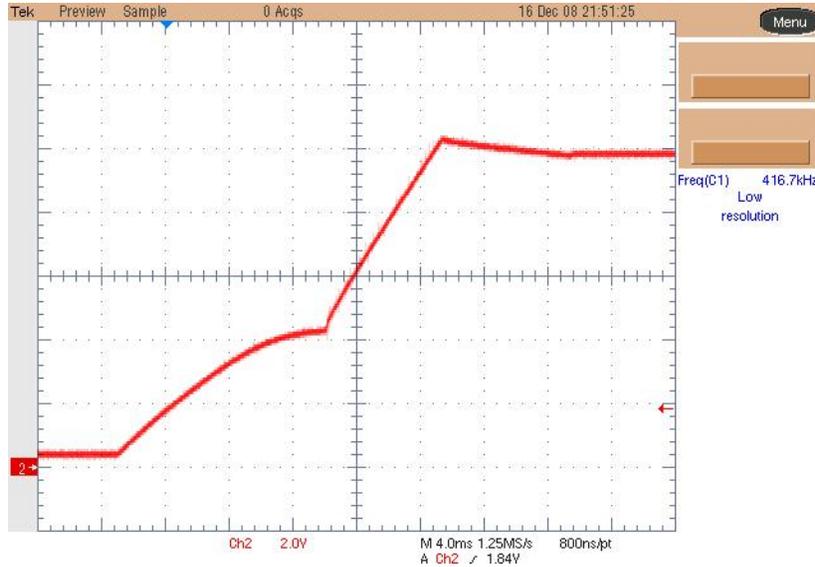


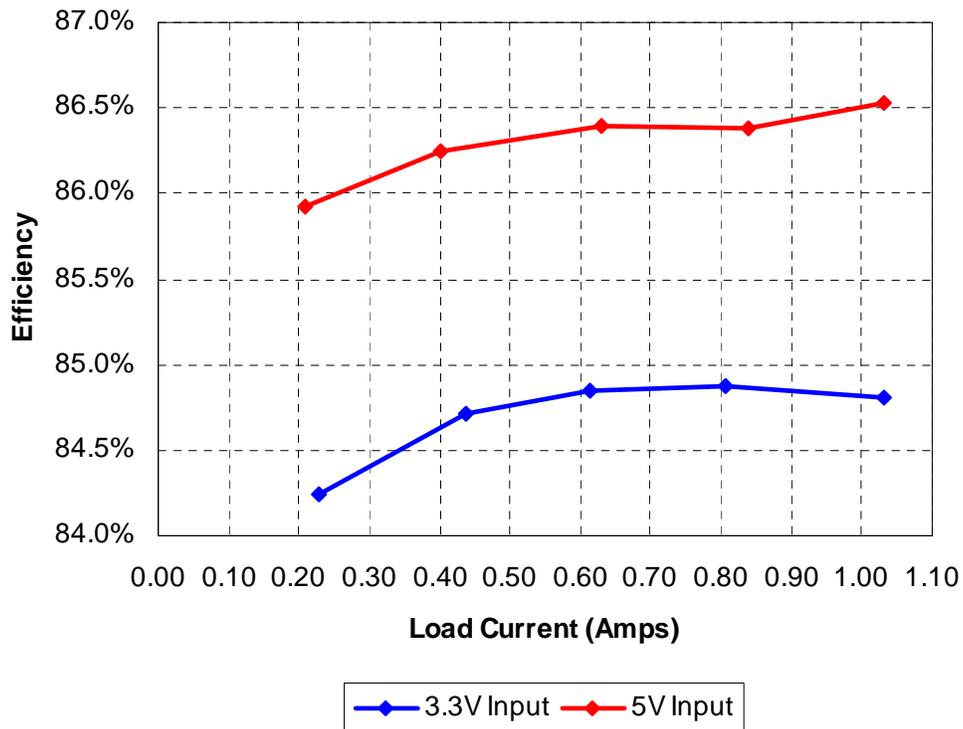
## 1 Startup

The startup waveform is shown in the image below. For this image, a 4Vdc input was applied, and the load was set to 1A. Channel 2: Vout (dc coupled) 2V/div, time division: 4ms /div.



## 2 Efficiency

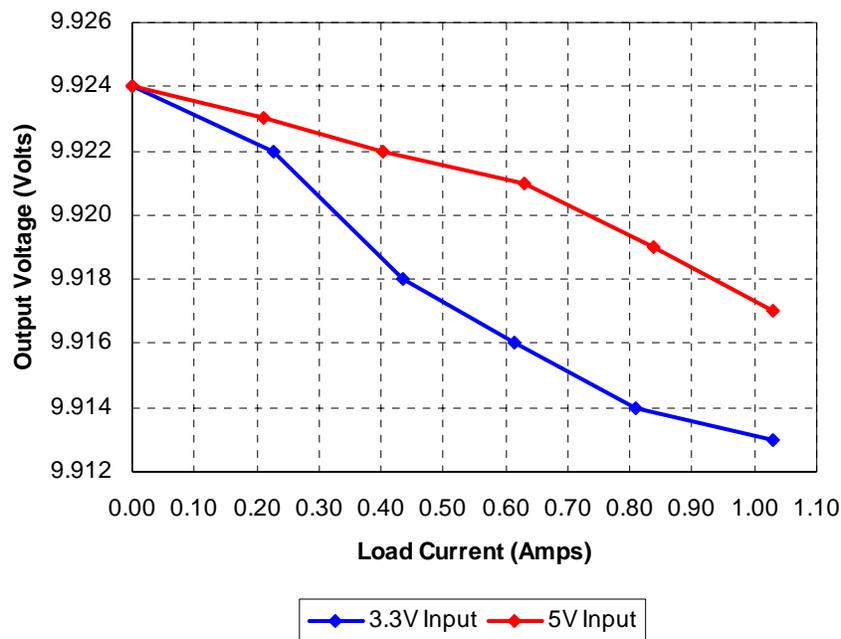
The efficiency data is shown in the tables and graph below. The full load is allowed for only 200msec, so the efficiency curves were taken at 3.3V<sub>in</sub> and 5V<sub>in</sub>, with 1A load.



Iout	Vout	Vin (DC)	Iin (mA)	Pout	Losses	Efficiency
0.0000	9.924	3.312	6	0.00	0.020	0.00%
0.2273	9.922	3.309	809	2.26	0.422	84.25%
0.4359	9.918	3.301	1546	4.32	0.780	84.71%
0.6134	9.916	3.308	2167	6.08	1.086	84.85%
0.8075	9.914	3.346	2819	8.01	1.427	84.87%
1.0307	9.913	3.310	3640	10.22	1.831	84.80%

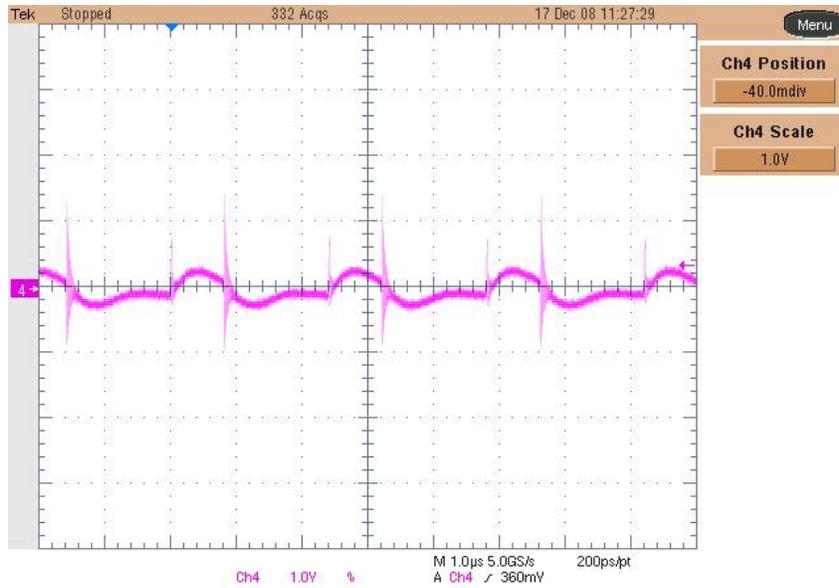
Iout	Vout	Vin (DC)	Iin (mA)	Pout	Losses	Efficiency
0.0000	9.924	5.004	4	0.00	0.020	0.00%
0.2102	9.923	5.005	485	2.09	0.342	85.93%
0.4023	9.922	5.014	923	3.99	0.636	86.25%
0.6290	9.921	5.009	1442	6.24	0.983	86.40%
0.8390	9.919	5.052	1907	8.32	1.312	86.38%
1.0308	9.917	5.006	2360	10.22	1.592	86.53%

### 3 Output Voltage Regulation



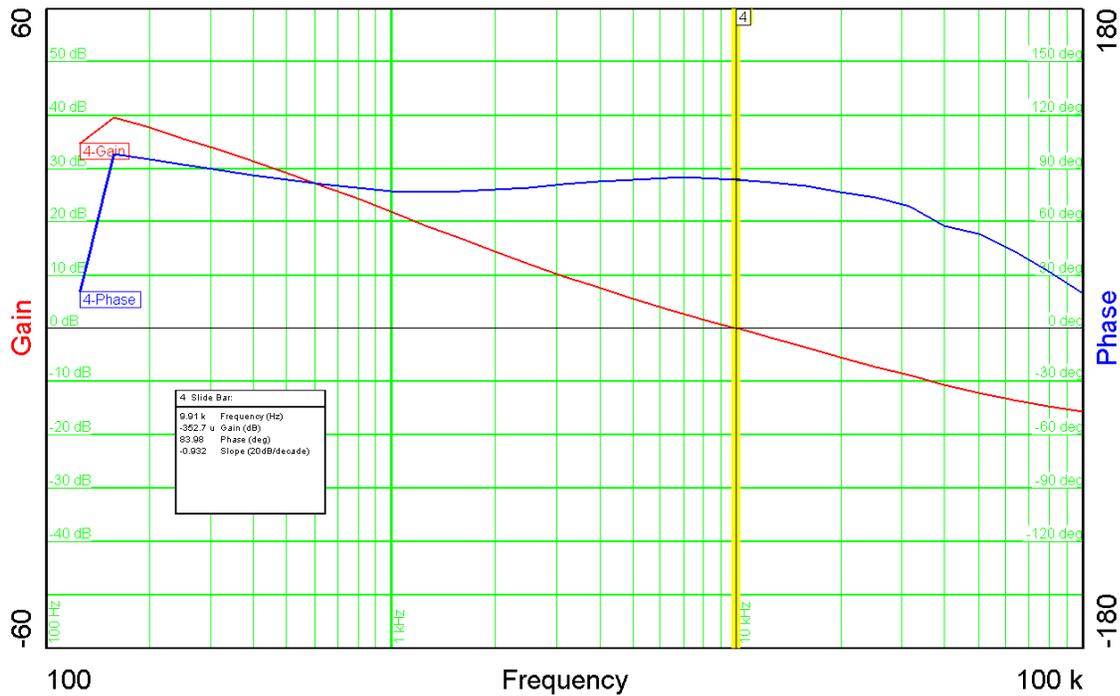
### 4 Output Ripple Voltage

The output ripple voltage is shown below. The input voltage was set at 4V and a 2.5A load was applied. Channel 4: Vout (ac coupled) 1V/div, time division: 1us/div.



### 5 Loop Response

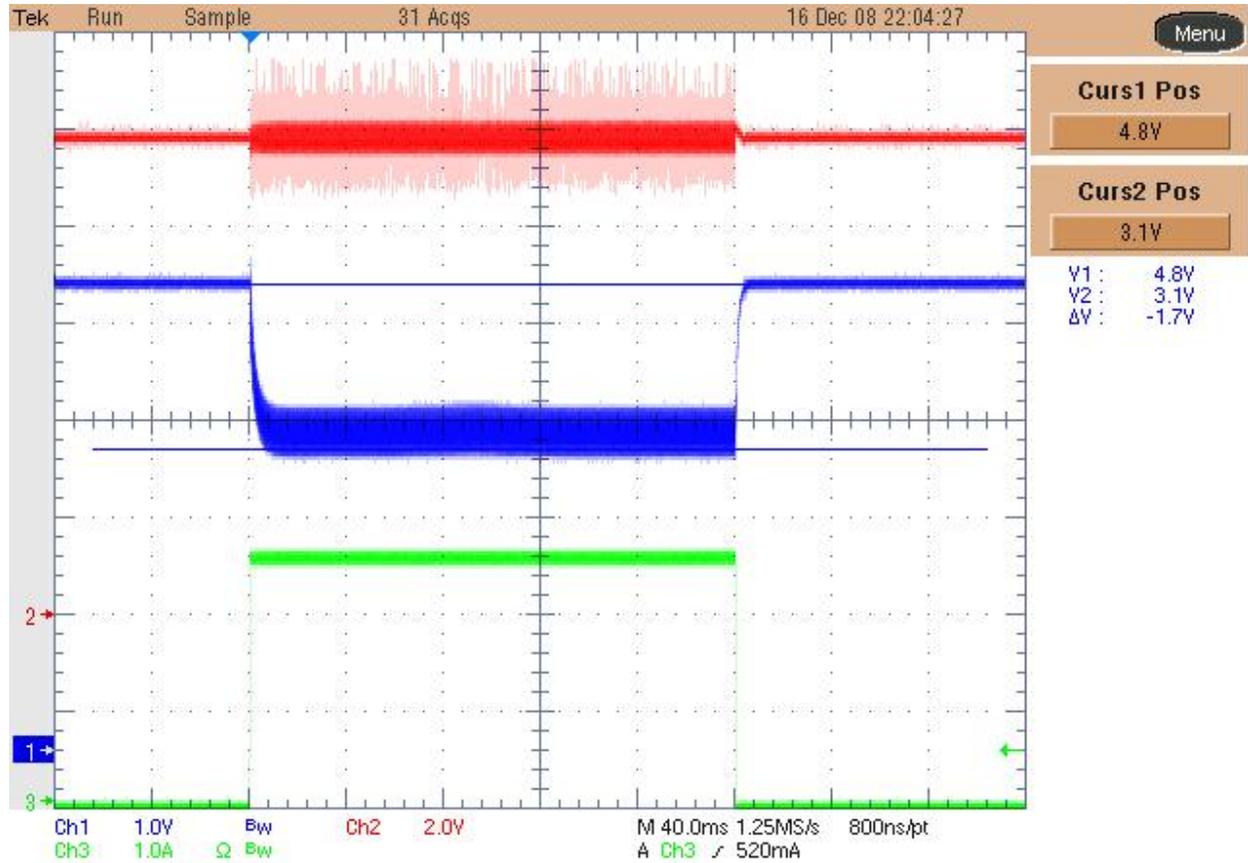
The image below shows the loop response of the converter measured with a 3.16V input, and a 1.5A load. The crossover frequency was 9.91KHz and phase margin 83.98 deg.



## 6 Load Transients

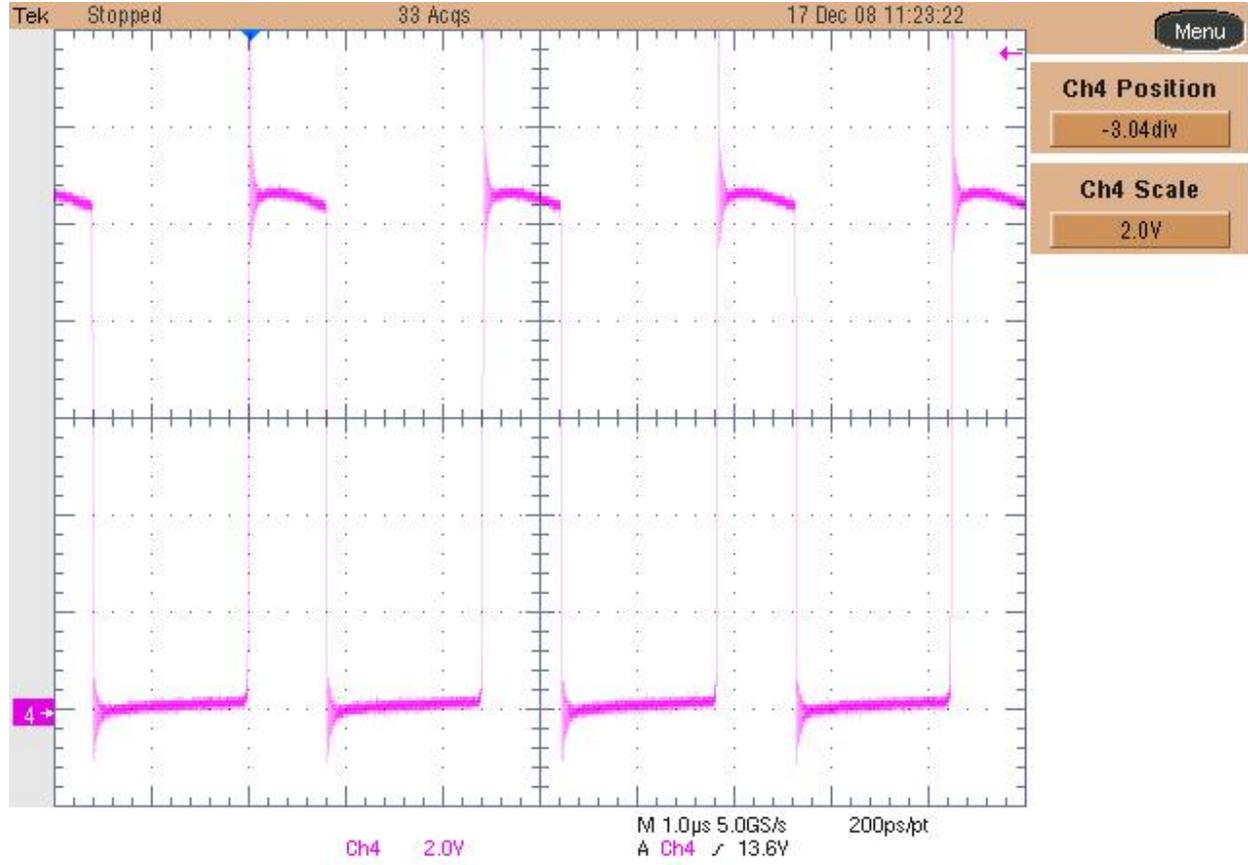
The image below shows the response to a 0A to 2.5A 200ms load transient. The input voltage was set to 4.8V, but because of the voltage drop on the supply cables it goes down to 3.1V (which is the real case).

Channel 1: Vin (dc coupled) 1V/div  
Channel 2: Vout (dc coupled) 2V/div  
Channel 3: Iout 1A/div  
Time division: 40ms/div



## 7 Switching Waveforms

The image below shows the voltage on the drain of Q2. The input was set at 3.5V, and the load was set to 2.5A. Channel 4: Vds (dc coupled) 2V/div, time division: 1us/div



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