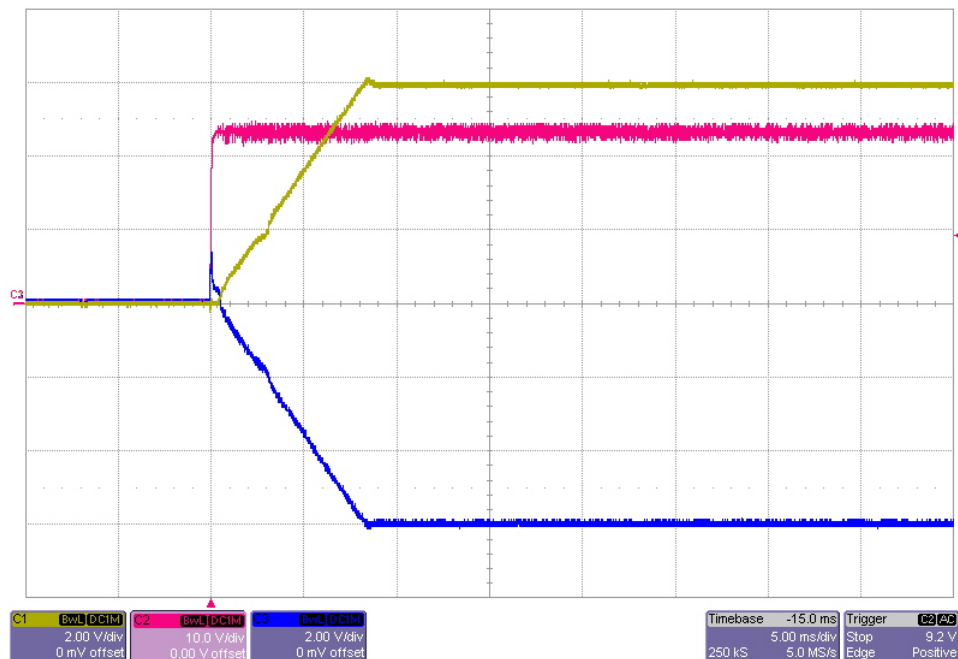
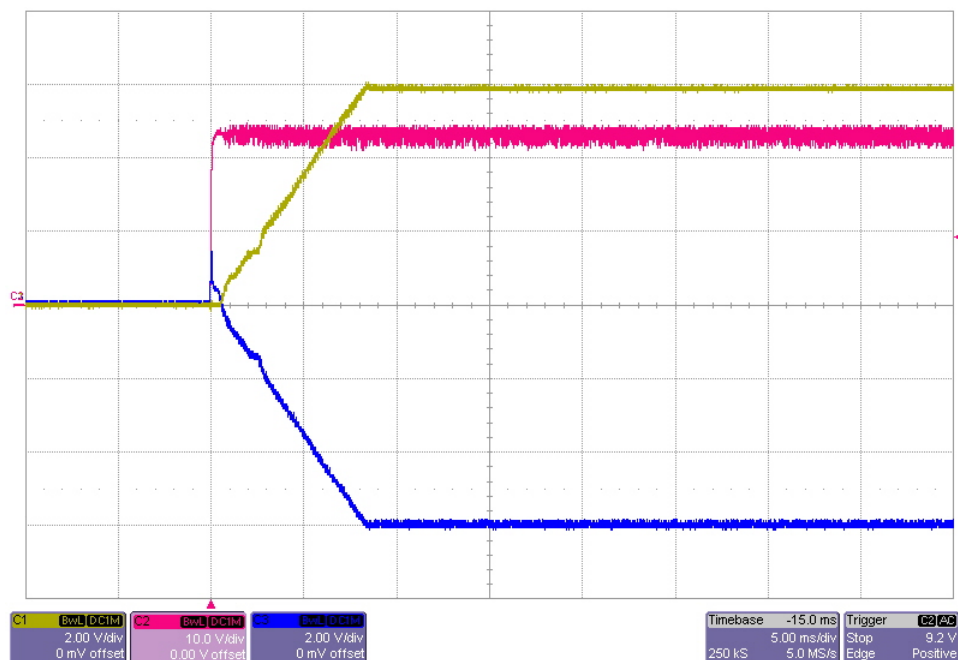


1 Startup

The photo below shows the +6V and -6V output voltage startup waveforms after the application of 24Vdc. The outputs were loaded to 0A each. (V_{in} is 10V/DIV, V_{out} is 2V/DIV, 5mS/DIV)

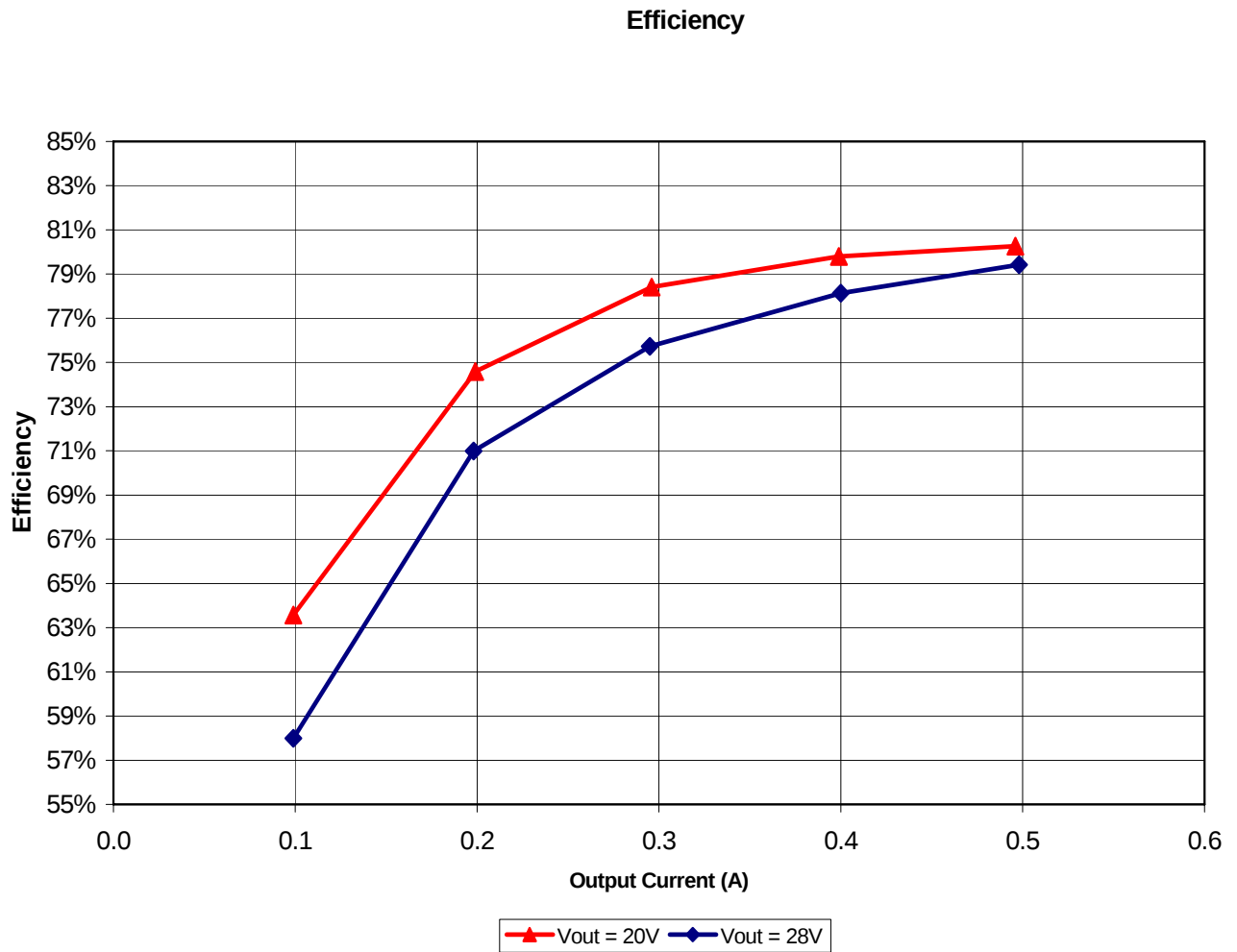


The photo below shows the +6V and -6V output voltage startup waveforms after the application of 24Vdc. The outputs were loaded to 0.5A each. (V_{in} is 10V/DIV, V_{out} is 2V/DIV, 5mS/DIV)



2 Efficiency

The converter efficiency is shown in the figure below. Both outputs are loaded equally.



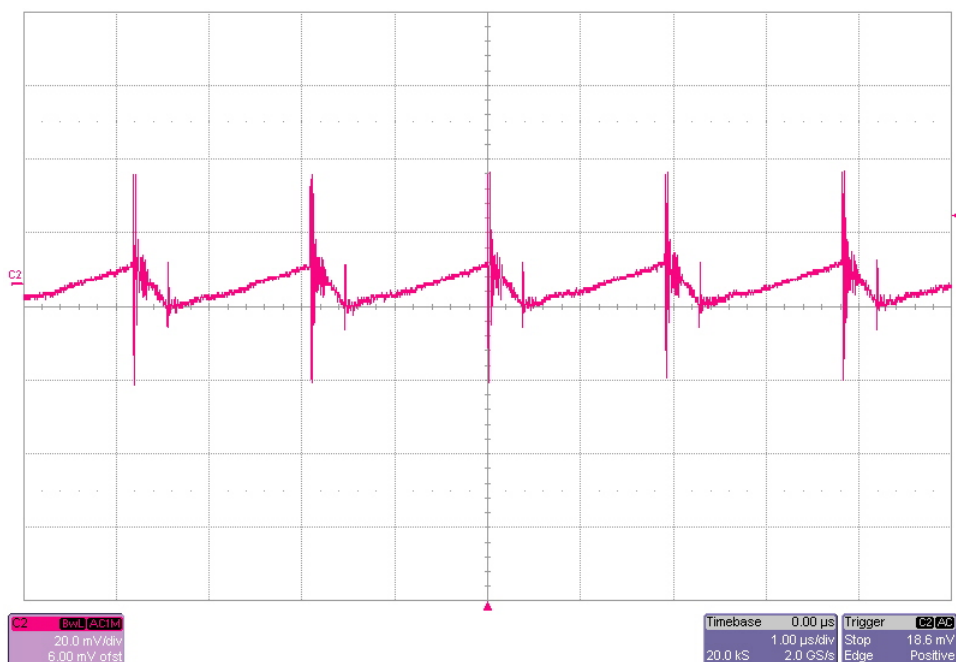
3 Voltage Regulation

The converter cross loading regulation is shown below.

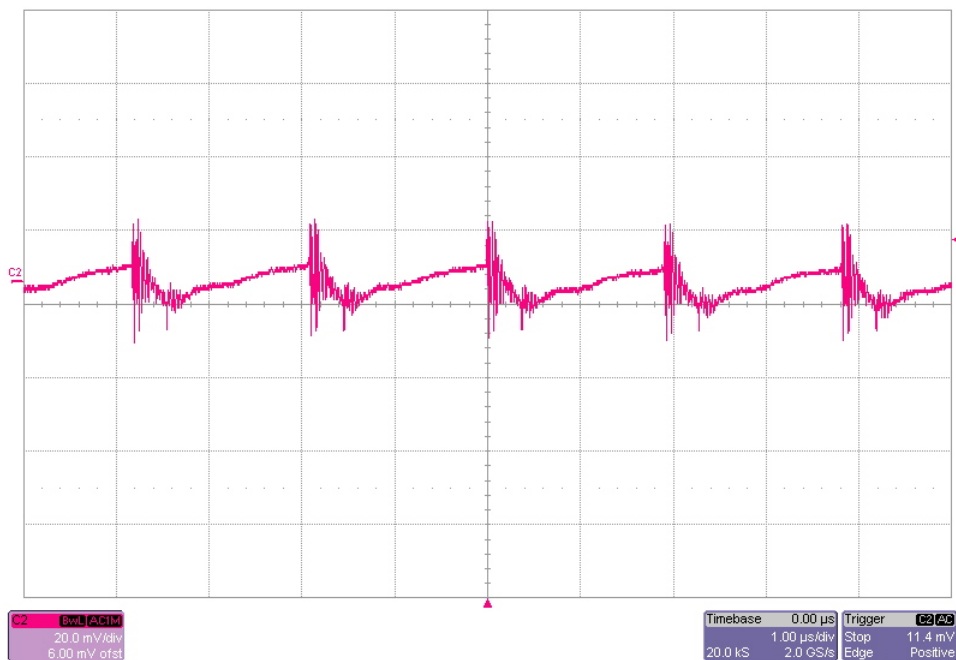
Loading		Vin = 20V		Vin = 24V		Vin = 28V	
+6V	-6V	+6V	-6V	+6V	-6V	+6V	-6V
0.5A	0.5A	+5.98	-6.03	+5.99	-6.03	+6.00	-6.03
0.25A	0.25A	+6.01	-6.03	+6.00	-6.03	+6.00	-6.03
0.05A	0.05A	+6.02	-6.03	+6.02	-6.03	+6.02	-6.03
0A	0A	+6.03	-6.03	+6.03	-6.03	+6.03	-6.03
0.5A	0.375A	+5.92	-6.03	+5.93	-6.03	+5.94	-6.03
0.5A	0.25A	+5.84	-6.03	+5.85	-6.03	+5.86	-6.03
0.5A	0.05A	+5.71	-6.03	+5.72	-6.03	+5.71	-6.03
0.5A	0A	+5.54	-6.03	+5.51	-6.03	+5.47	-6.03
0.375A	0.5A	+6.06	-6.03	+6.07	-6.03	+6.07	-6.03
0.25A	0.5A	+6.15	-6.03	+6.15	-6.03	+6.15	-6.03
0.05A	0.5A	+6.31	-6.03	+6.29	-6.03	+6.27	-6.03
0A	0.5A	+6.44	-6.03	+6.38	-6.03	+6.35	-6.03

4 Output Ripple Voltage

The -6V output ripple voltage is shown in the figure below. The image was taken with both outputs loaded to 0.5A and the input voltage set to 28Vdc. (20mV/DIV, 1uS/DIV)

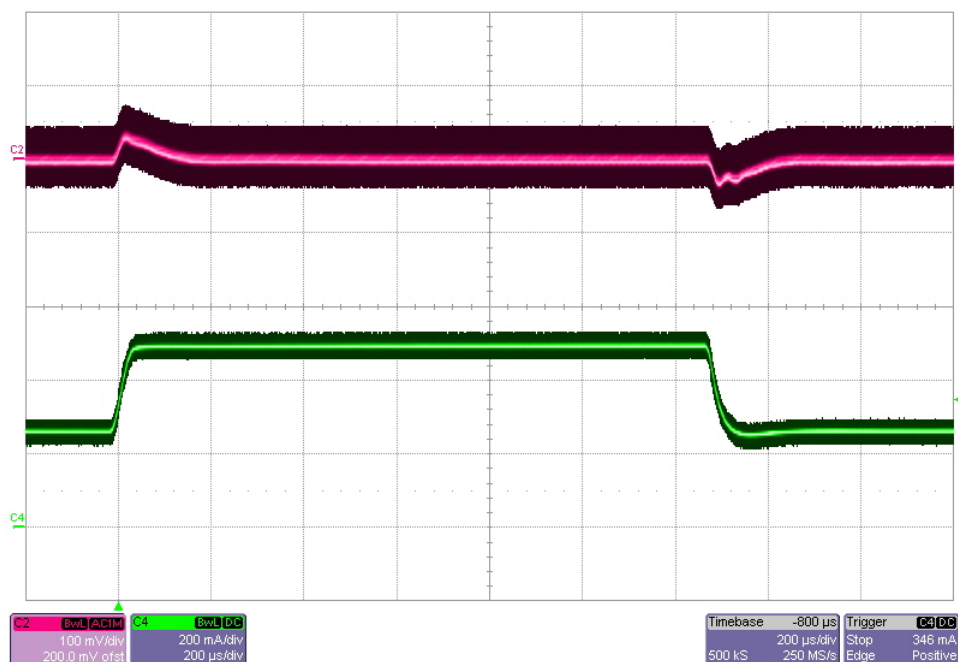


The +6V output ripple voltage is shown in the figure below. The image was taken with both outputs loaded to 0.5A and the input voltage set to 28Vdc. (20mV/DIV, 1uS/DIV)

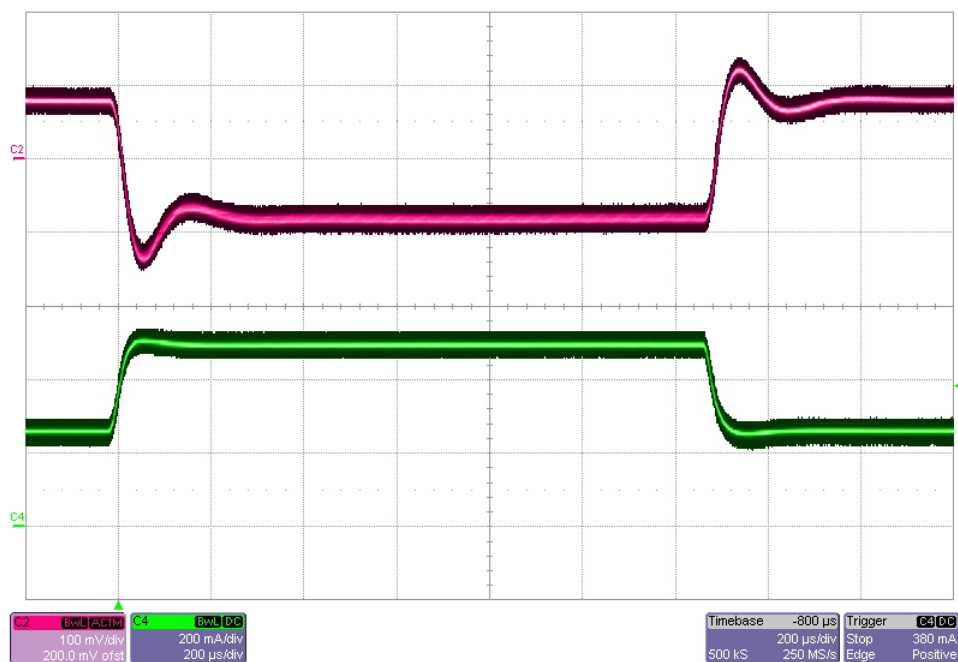


5 Load Transients

The photo below shows the -6V output voltage when the load current is stepped between 0.25A and 0.5A. $V_{in} = 24V_{dc}$. The +6V output is loaded to 0.5A. (100mV/DIV, 200mA/DIV, 200uS/DIV)



The photo below shows the +6V output voltage when the load current is stepped between 0.25A and 0.5A. $V_{in} = 24V_{dc}$. The -6V output is loaded to 0.5A. (100mV/DIV, 200mA/DIV, 200uS/DIV)

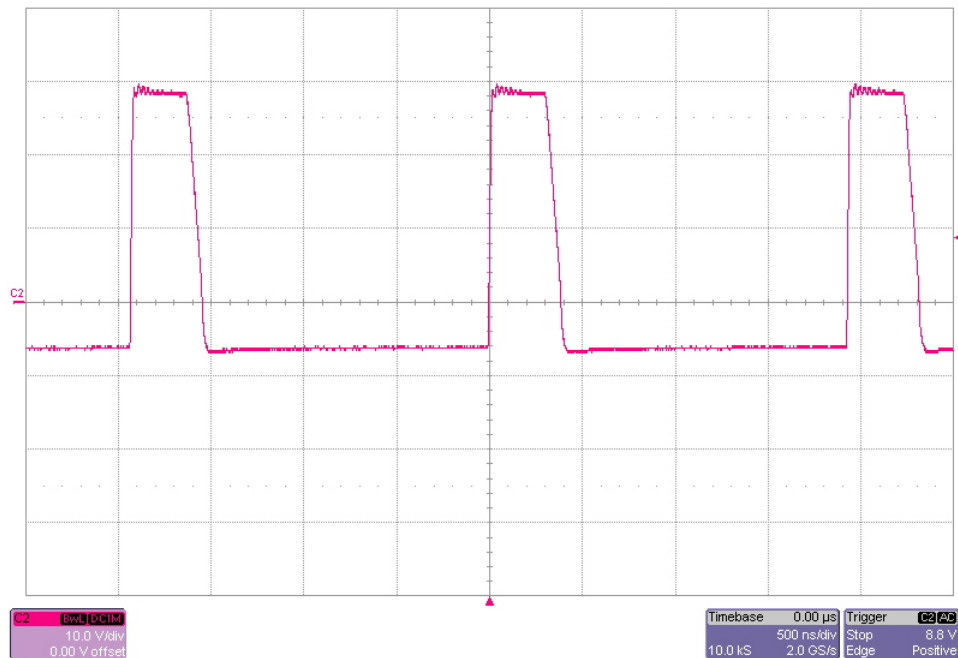


6 Switch Node Waveforms

The photo below is of the controllers switch node (TP3). The input voltage is 20V and the outputs were loaded to 0.5A each. (10V/DIV, 500nS/DIV)

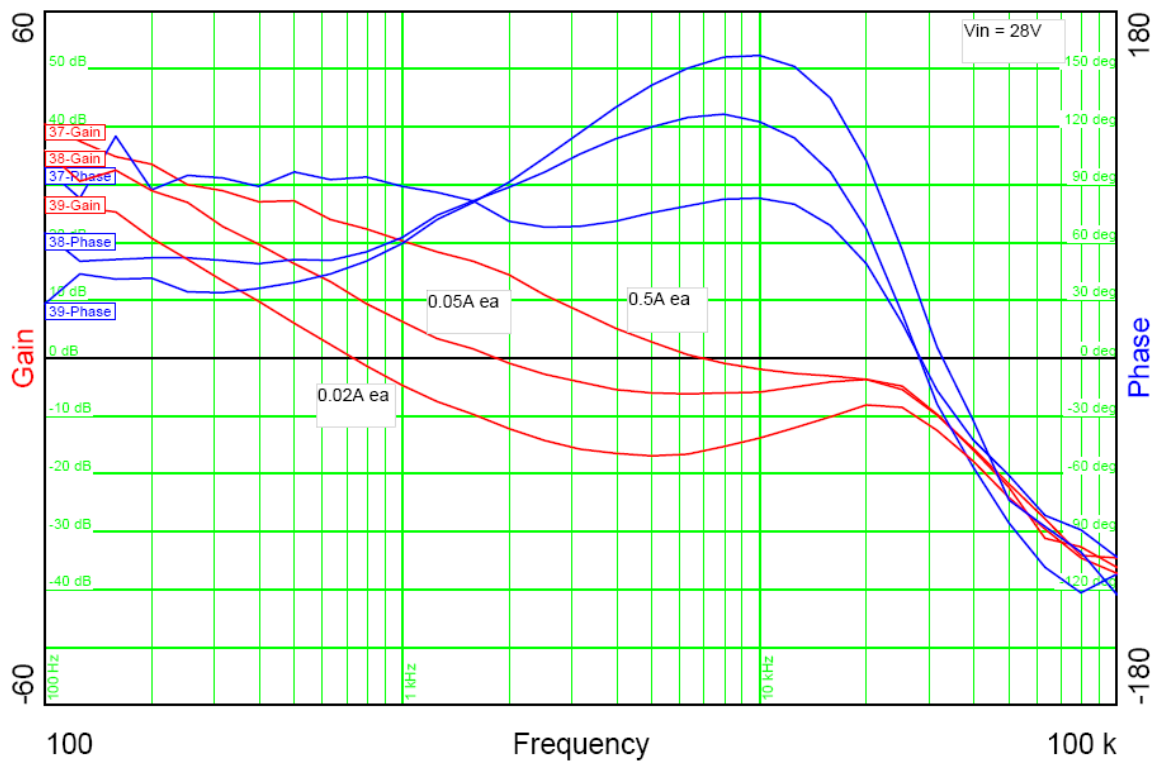


The photo below is of the controllers switch node (TP3). The input voltage is 28V and the outputs were loaded to 0A each. (10V/DIV, 500nS/DIV)



7 Control Loop Gain / Stability

The plot below shows the loop gain and phase margin of the converter with the input voltage set to 28V and the outputs (each) loaded to various loads.



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