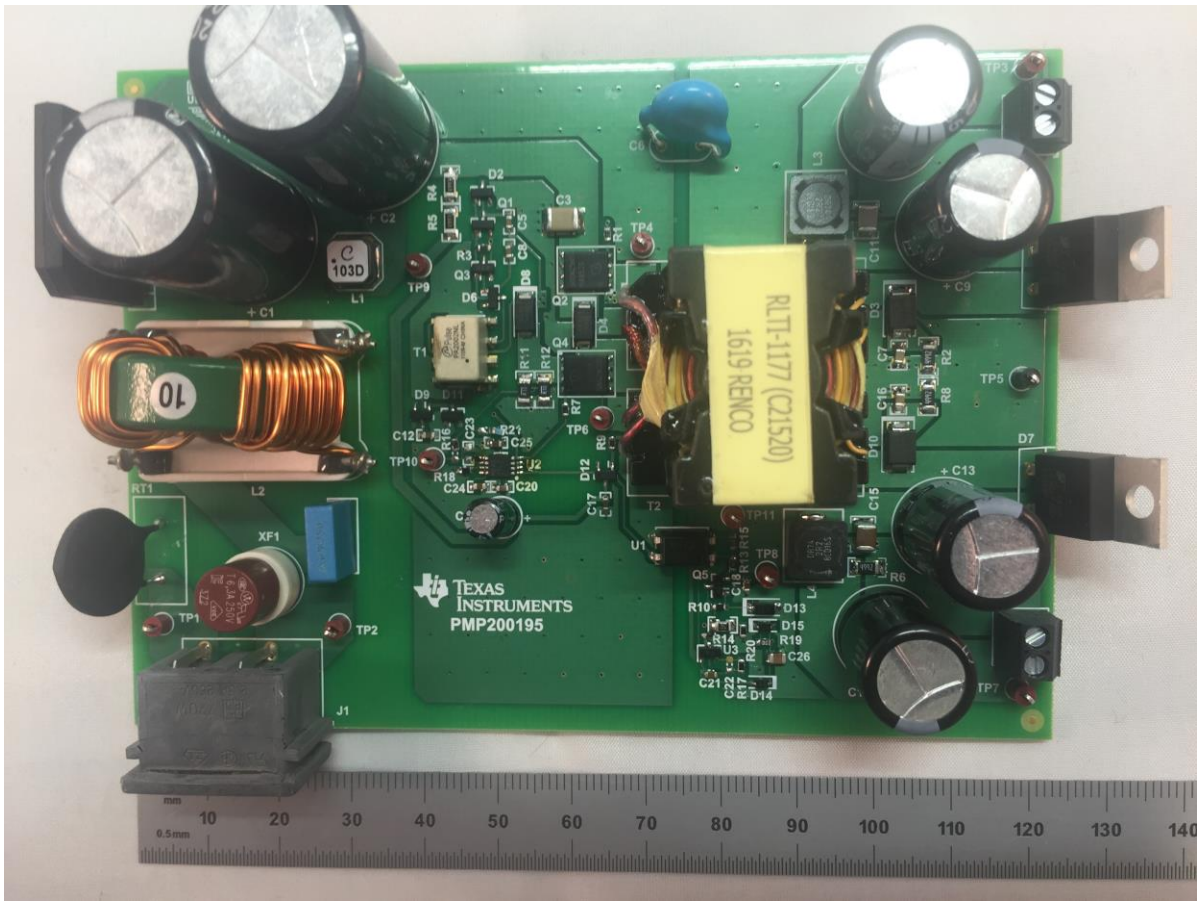
1 Photo

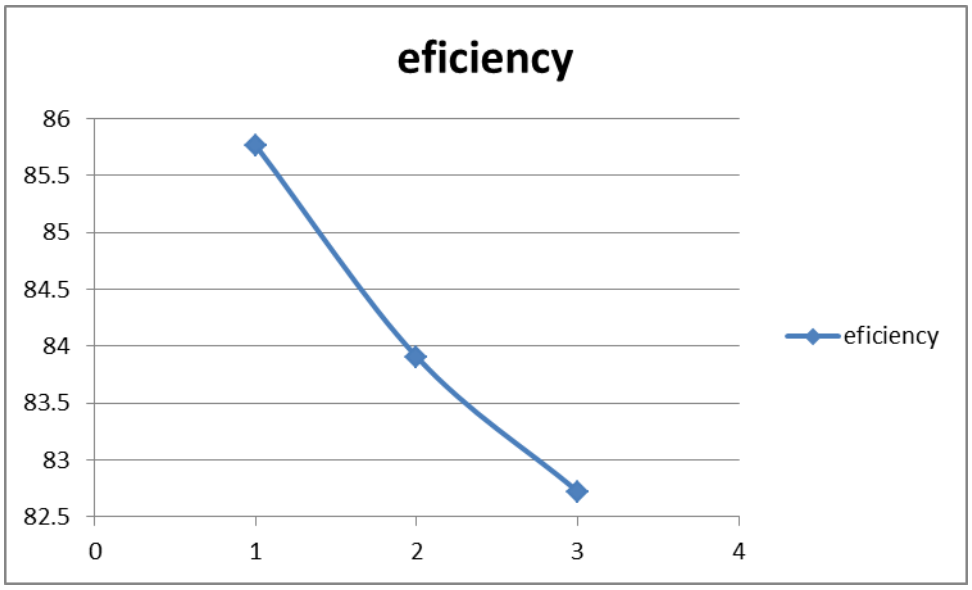


2 Efficiency

Since measuring AC to DC efficiency tends to be not as accurate, DC to DC efficiency was also measured. The DC was applied after the bridge rectifier and does not include losses in the AC bridge rectifier and NTC.

DC to DC vin	after the bridge iin	pin	vout	iout	efficiency	pout
120	0.45	54	48.2	1	89.25926	48.2
120	0.9	108	48.2	2	89.25926	96.4
120	1.42	170.4	48.2	3	84.85915	144.6
150	0.36	54	48.2	1	89.25926	48.2
150	0.72	108	48.2	2	89.25926	96.4
150	1.1	165	48.2	3	87.63636	144.6
300	0.19	57	48.2	1	84.5614	48.2
300	0.37	111	48.2	2	86.84685	96.4
300	0.55	165	48.2	3	87.63636	144.6

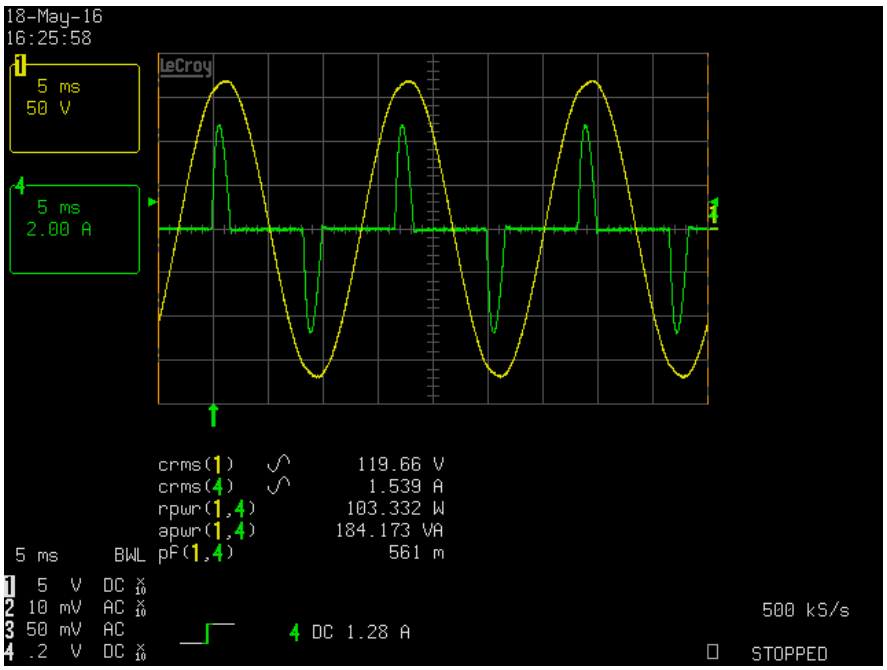
AC to DC	Power factor	pin	vout		eficiency	pout
120	0.53	56.2	48.2	1	85.76512	48.2
	0.59	114.89	48.2	2	83.90635	96.4
	0.6	174.8	48.2	3	82.72311	144.6
240	0.43	57.6	48.2	1	83.68056	48.2
	0.46	114.77	48.2	2	83.99408	96.4
	0.5	173.38	48.2	3	83.40062	144.6



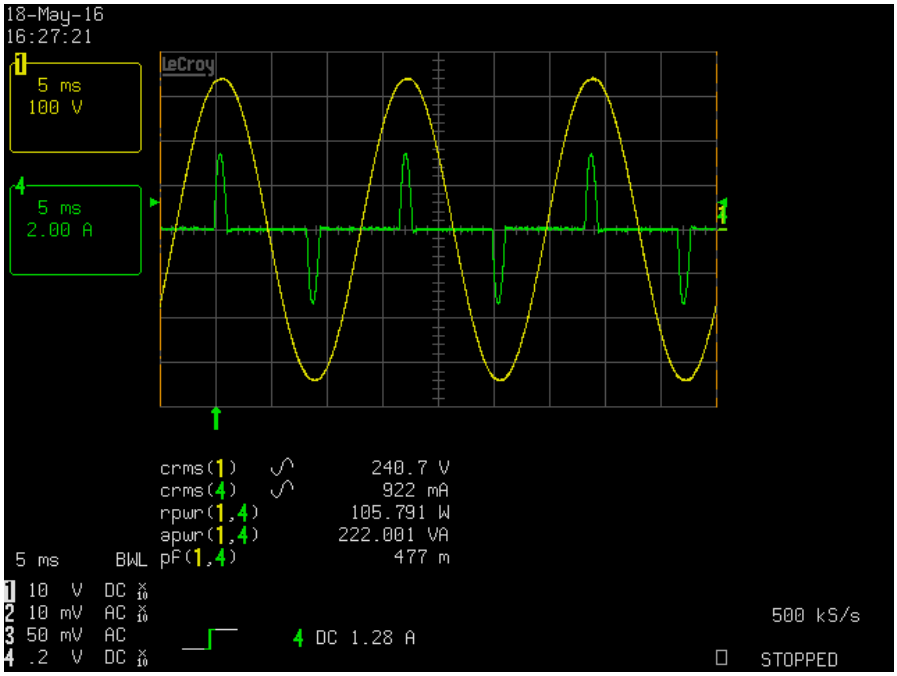
With 120 ADC input

With 240 AC input

3 AC line



Line current and voltage at 120 VAC (100 watt load)



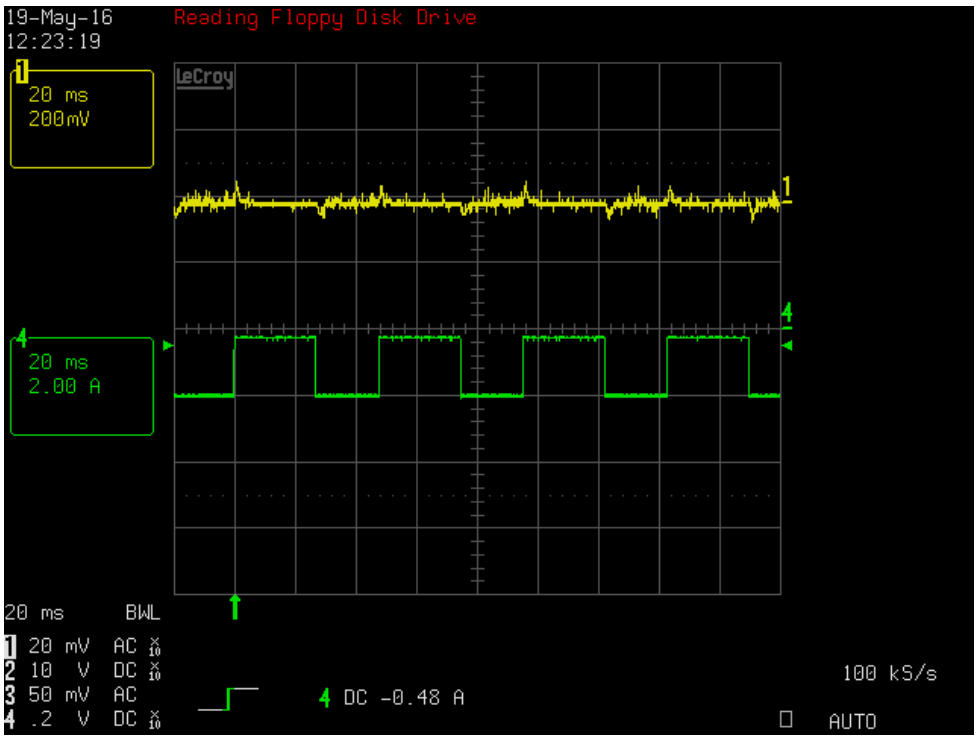
Line current and voltage at 240VAC (100 watt load)

4 Cross regulation

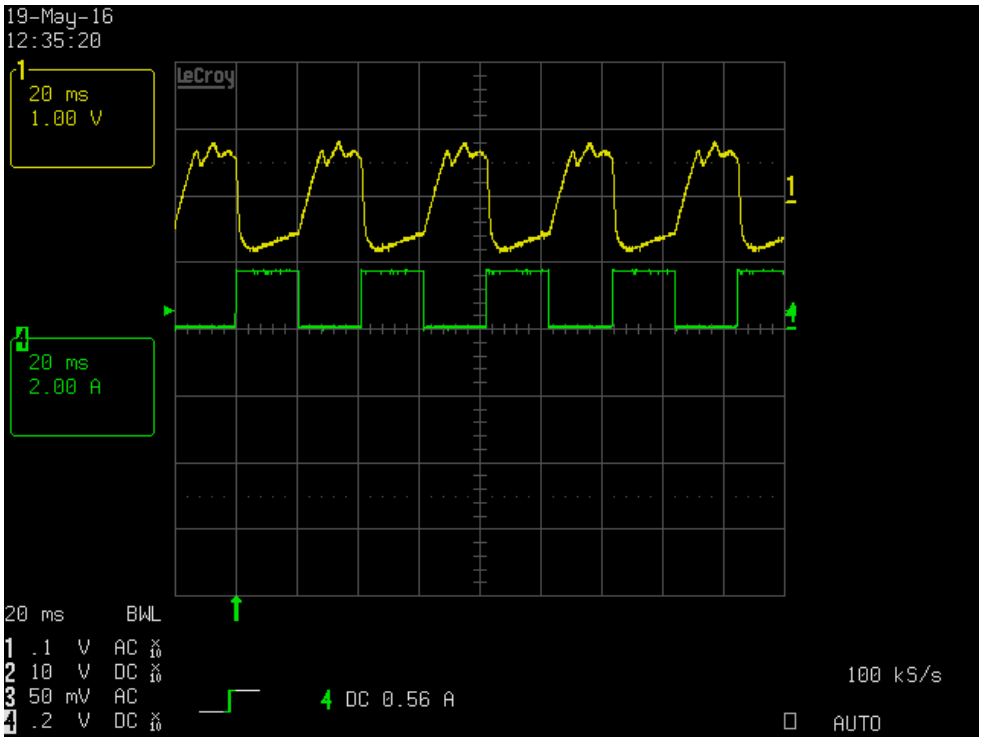
DC cross regulation

pos 24v	pos I	neg 24v	neg I
24.1	0.1	22.7	1
24.1	0.1	21.4	2
24.1	0.1	24.2	0.1
24.1	1	25.1	0.1
24.1	2	25.7	0.1

Dynamic cross regulation

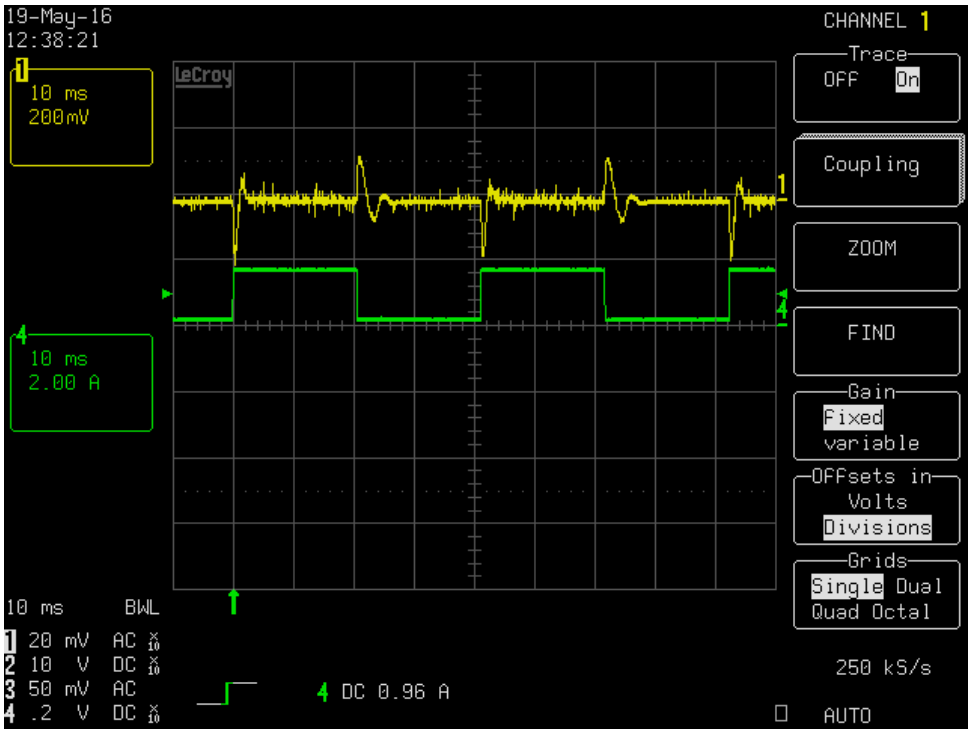


Top is the +24 while the neg 24 being pulsed from 0 to 2 amps



Top is the neg 24 while the pos 24 is being pulsed form 0 to 2 amps

5 Load step response



Pos 24 voltage response to a 2 amp load step

6 Thermal image

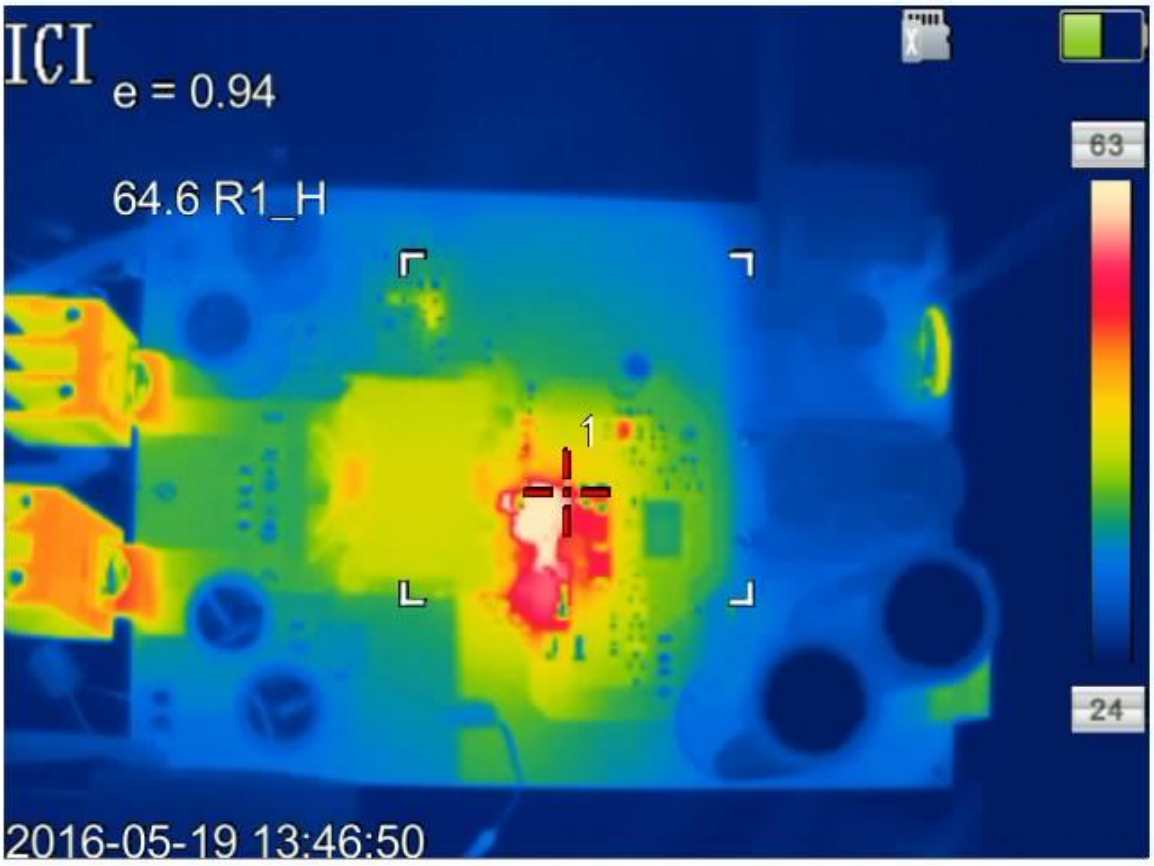
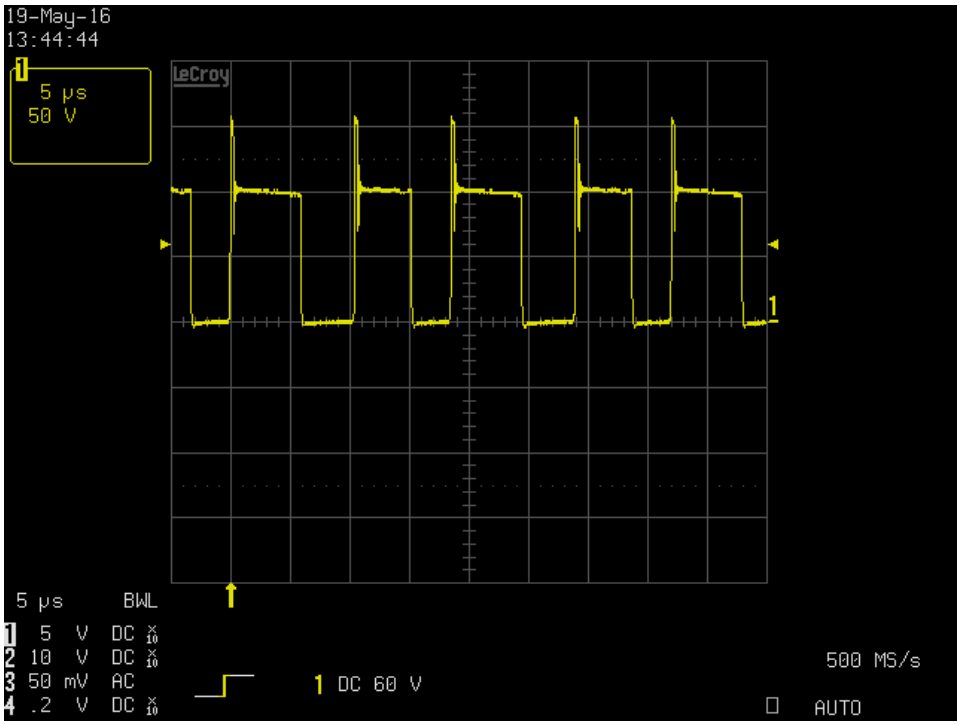
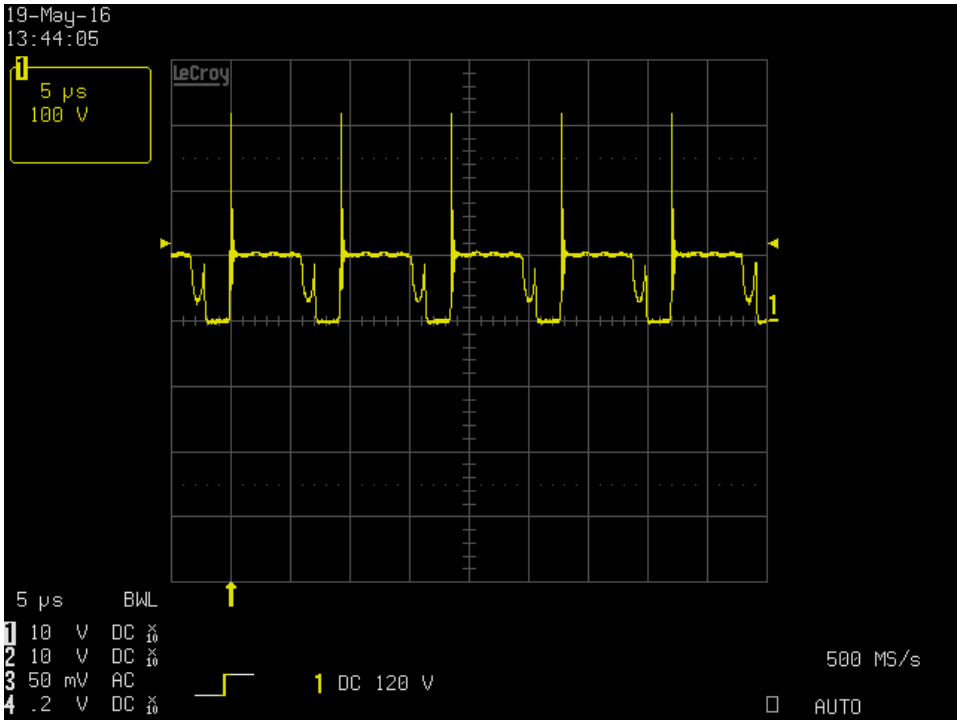


Image taken at full load in still air at 24 deg C. the hottest part on the board is about 65 deg C

7 Dain wave form.



Yellow is the primary drain Q4 with 150 vdc input. 50 watt load



Q4 drain with 300 VDC input. 50 watt load

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