

**Test Data
For PMP7970
5/10/2016**

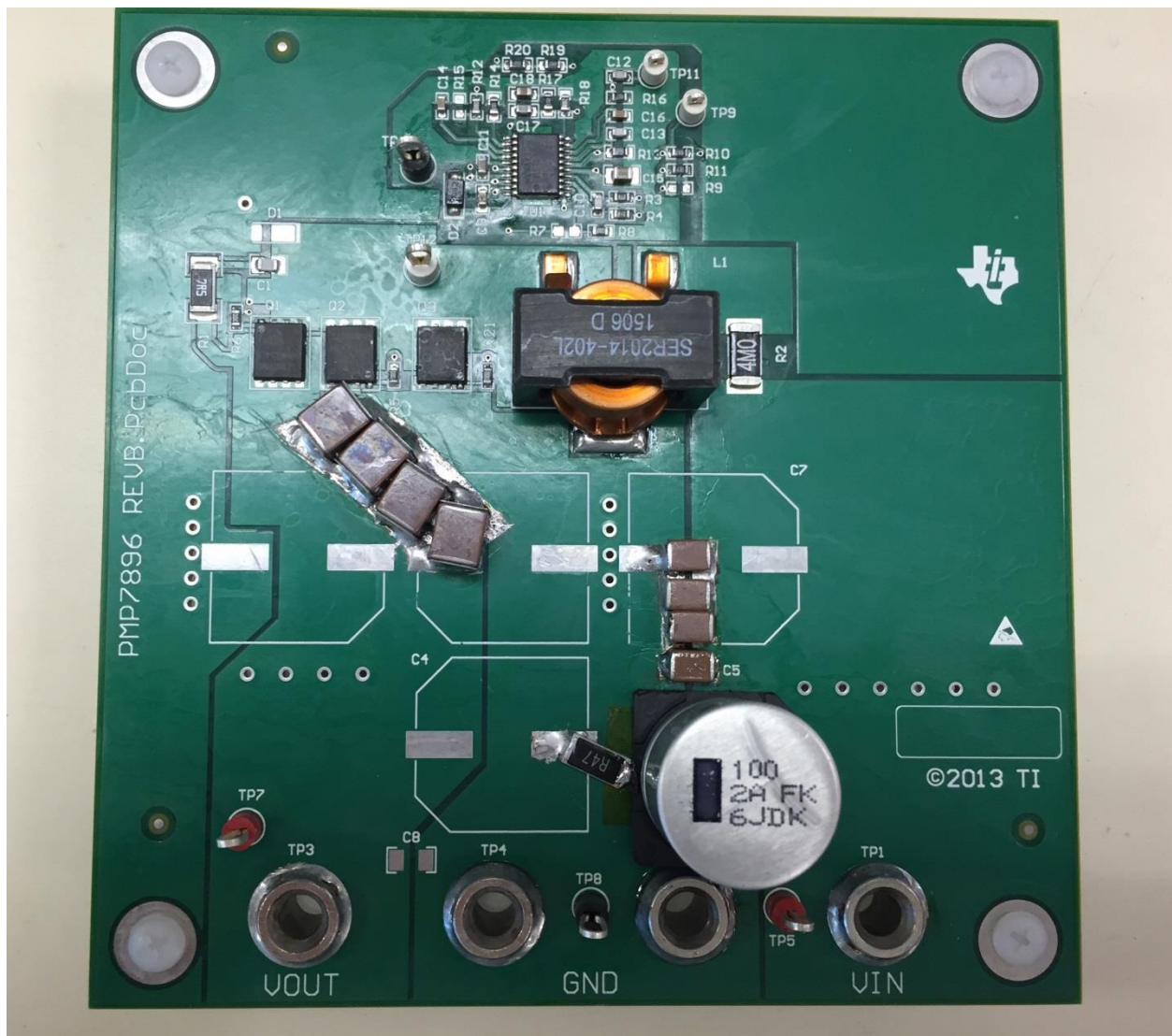


Vin	12V to 50V
Vout	54V
Iout Max	2.5A
Fsw	230 kHz

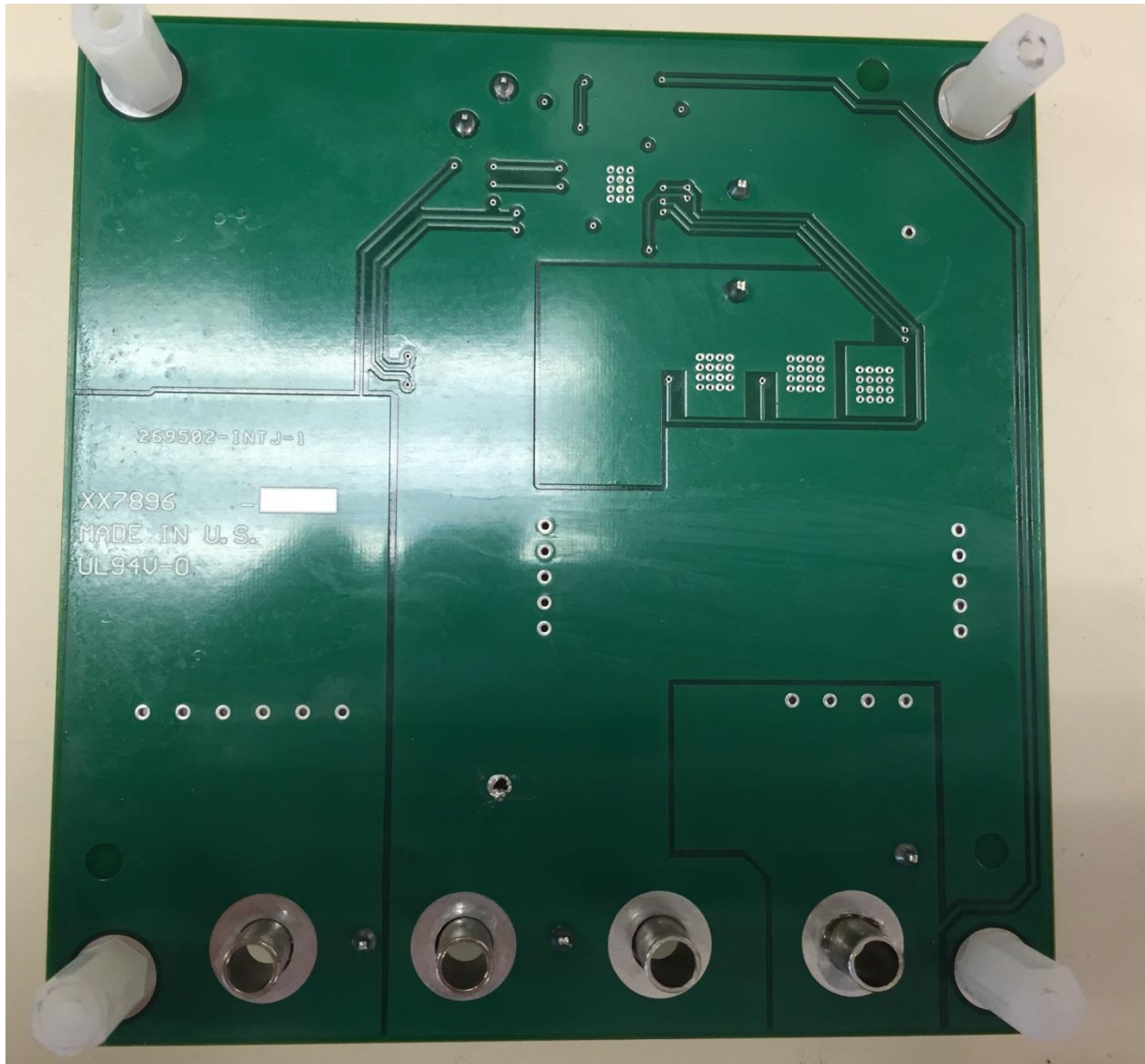
FABRICATION

Board Dimensions: 4" X 3.7"

Top Side

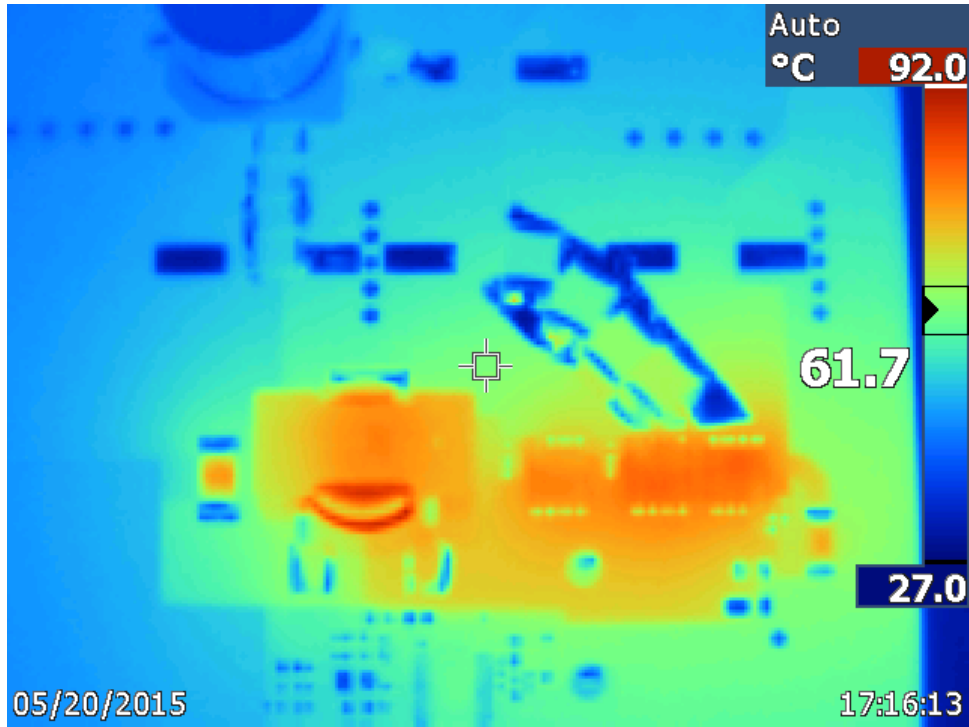


Bottom Side

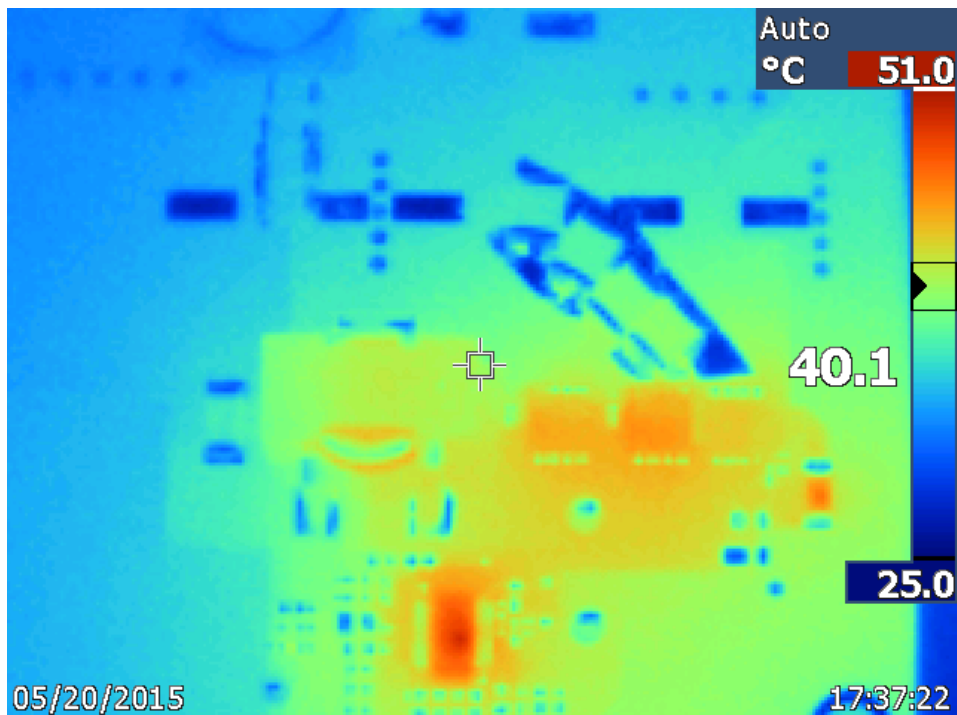


Thermal image.

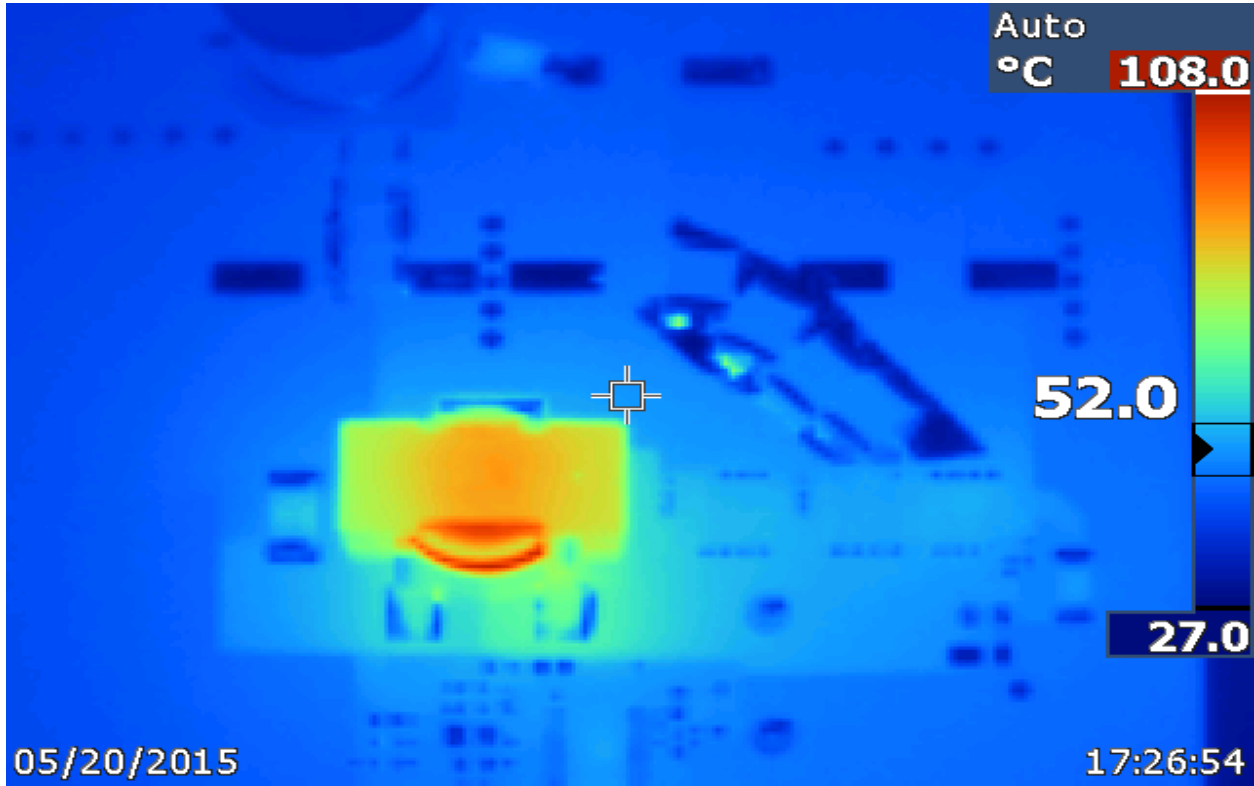
24V in with a load of 2.5A at 54V out steady state temperature.



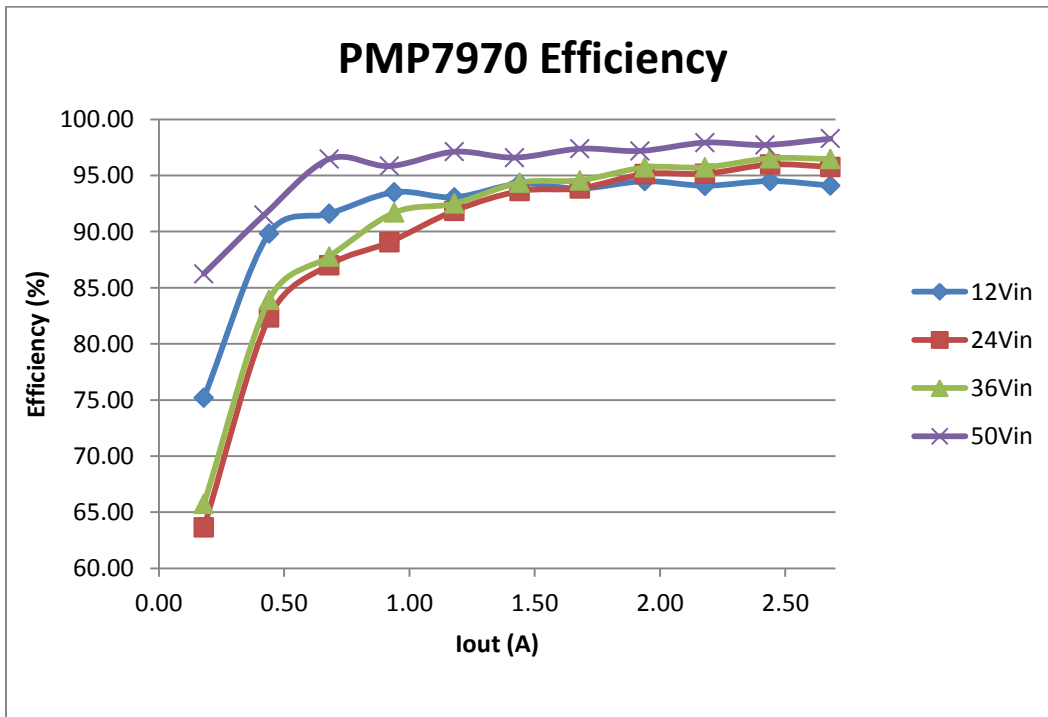
50V in with a load of 2.5A at 54V out steady state temperature.



12V in with a load of 2.5A at 54V out steady state temperature.



Efficiency Curve



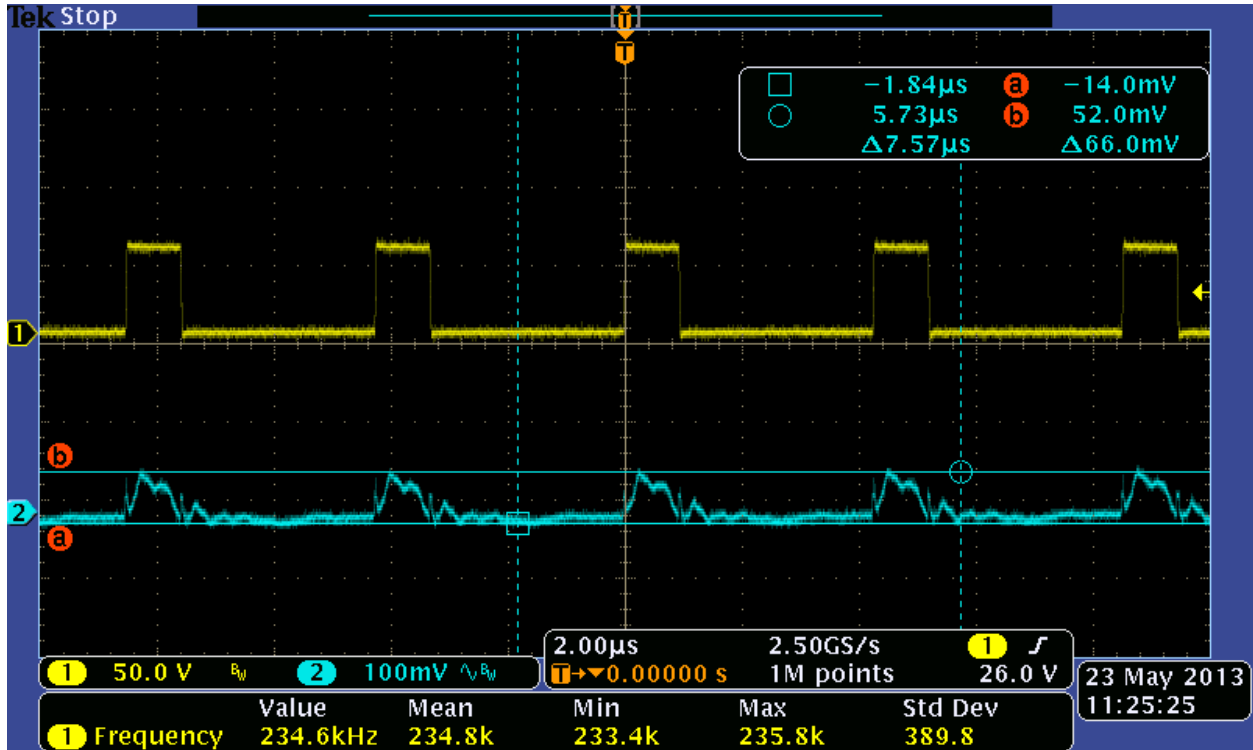
Efficiency Curve Data

Vin(V)	Iin(A)	Pin(W)	Vout(V)	Iout(A)	Pout(W)	Losses(W)	Efficiency(%)
12.00	0.22	2.58	53.90	0.00	0.00	2.58	0.00
12.00	1.08	12.90	53.90	0.18	9.70	3.20	75.21
12.00	2.20	26.40	53.90	0.44	23.72	2.68	89.83
12.00	3.34	40.02	53.90	0.68	36.65	3.37	91.58
12.00	4.52	54.18	53.90	0.94	50.67	3.51	93.51
12.00	5.70	68.34	53.90	1.18	63.60	4.74	93.06
12.00	6.86	82.32	53.89	1.44	77.61	4.71	94.27
12.00	8.04	96.48	53.89	1.68	90.54	5.94	93.84
12.00	9.22	110.64	53.89	1.94	104.55	6.09	94.49
12.00	10.41	124.86	53.89	2.18	117.48	7.38	94.09
12.00	11.60	139.14	53.89	2.44	131.49	7.65	94.51
12.00	12.79	153.48	53.89	2.68	144.43	9.05	94.10
24.00	0.21	5.04	53.91	0.00	0.00	5.04	0.00
24.00	0.64	15.24	53.91	0.18	9.70	5.54	63.66
24.00	1.20	28.80	53.91	0.44	23.72	5.08	82.35
24.00	1.76	42.13	53.91	0.68	36.66	5.47	87.02
24.00	2.32	55.69	53.91	0.92	49.60	6.09	89.06
24.00	2.89	69.25	53.91	1.18	63.61	5.64	91.86
24.00	3.46	82.93	53.91	1.44	77.63	5.30	93.61
24.00	4.02	96.50	53.91	1.68	90.57	5.92	93.86
24.00	4.58	109.94	53.91	1.94	104.59	5.35	95.14
24.00	5.15	123.50	53.91	2.18	117.53	5.97	95.16
24.00	5.71	137.06	53.91	2.44	131.55	5.52	95.98
24.00	6.29	150.87	53.91	2.68	144.49	6.38	95.77
36.01	0.13	4.68	53.92	0.00	0.00	4.68	0.00
36.01	0.41	14.76	53.92	0.18	9.71	5.06	65.73
36.01	0.79	28.27	53.92	0.44	23.72	4.54	83.93
36.01	1.16	41.77	53.92	0.68	36.67	5.11	87.77
36.01	1.54	55.28	53.92	0.94	50.69	4.59	91.70
36.01	1.91	68.78	53.92	1.18	63.63	5.15	92.51
36.01	2.29	82.29	53.92	1.44	77.65	4.64	94.36
36.01	2.66	95.79	53.92	1.68	90.59	5.20	94.57
36.01	3.04	109.29	53.92	1.94	104.61	4.68	95.72
36.01	3.41	122.80	53.92	2.18	117.55	5.24	95.73
36.01	3.79	136.30	53.92	2.44	131.57	4.73	96.53
36.01	4.16	149.81	53.92	2.68	144.52	5.29	96.47

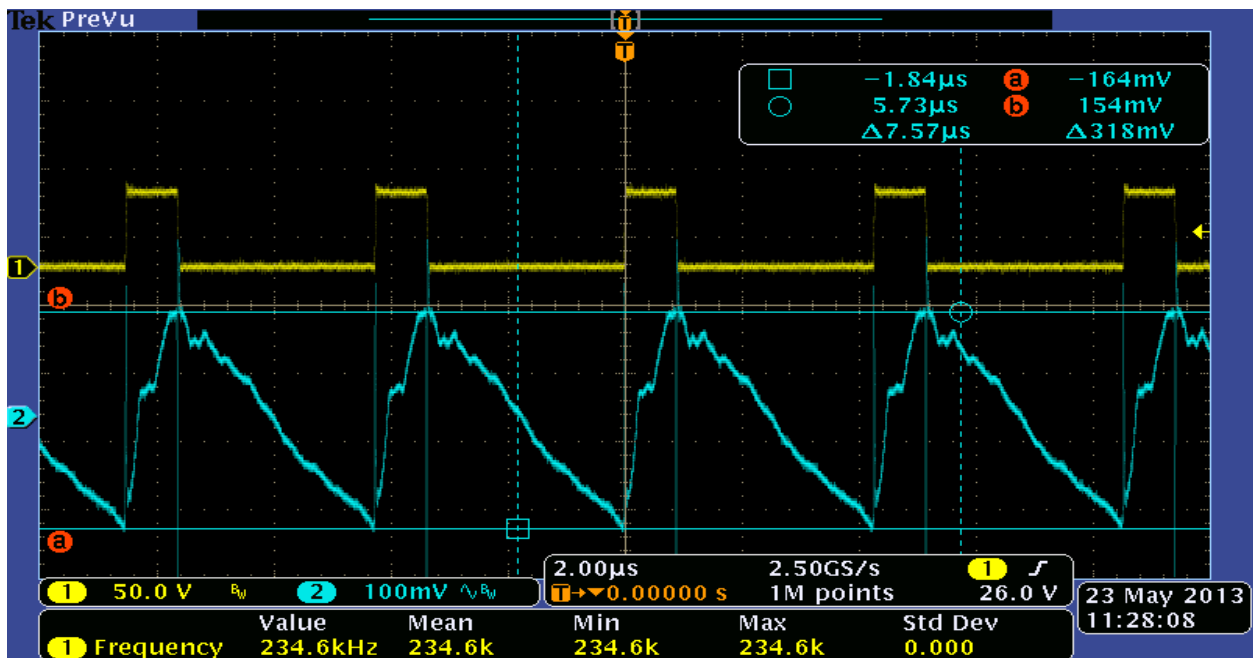
50.02	0.03	1.25	53.93	0.00	0.00	1.25	0.00
50.02	0.23	11.25	53.93	0.18	9.71	1.55	86.25
50.02	0.50	24.76	53.93	0.42	22.65	2.11	91.48
50.02	0.76	38.02	53.93	0.68	36.67	1.34	96.47
50.02	1.04	51.77	53.93	0.92	49.62	2.16	95.84
50.02	1.31	65.53	53.93	1.18	63.64	1.89	97.12
50.02	1.59	79.28	53.93	1.42	76.58	2.70	96.60
50.02	1.86	93.04	53.93	1.68	90.61	2.43	97.39
50.02	2.13	106.54	53.93	1.92	103.55	3.00	97.19
50.02	2.40	120.05	53.93	2.18	117.57	2.48	97.93
50.02	2.67	133.56	53.93	2.42	130.52	3.04	97.72
50.02	2.94	147.06	53.93	2.68	144.54	2.53	98.28

Waveforms

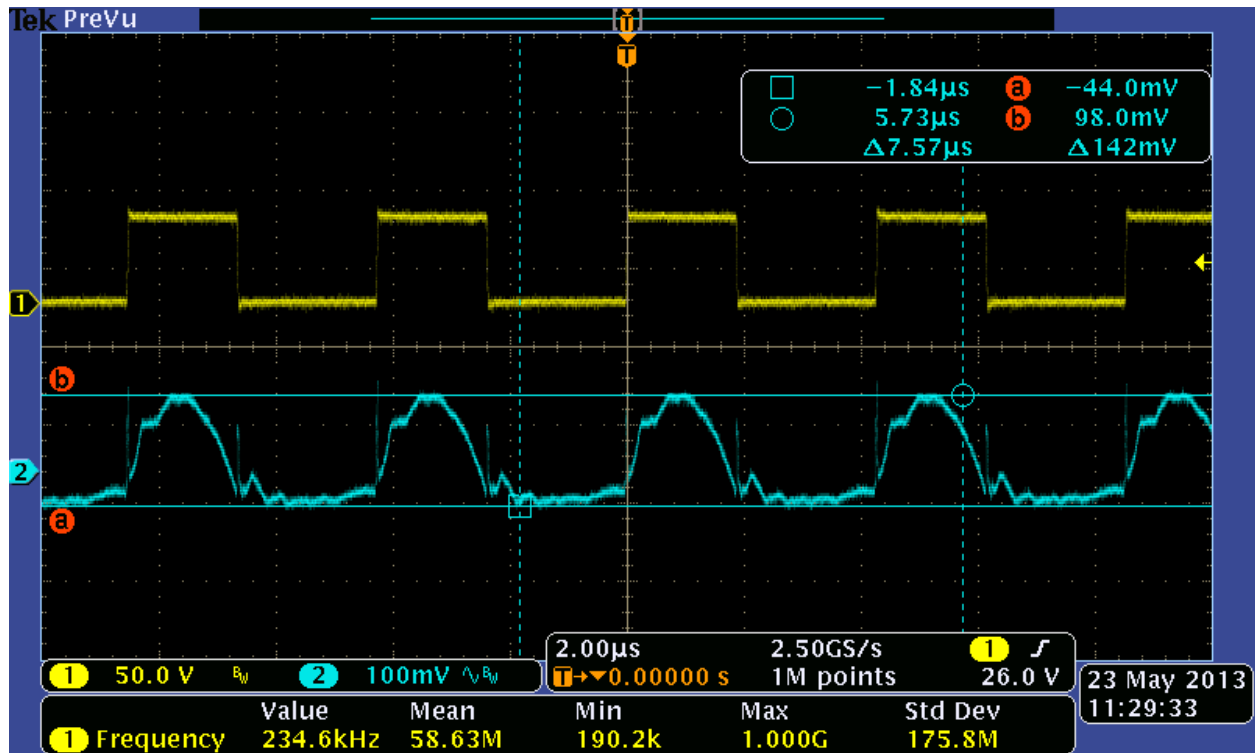
CH1 Primary Switch Node, CH2 Vout, 12V in, 54V out @ no load current. (66mV p-p Ripple)



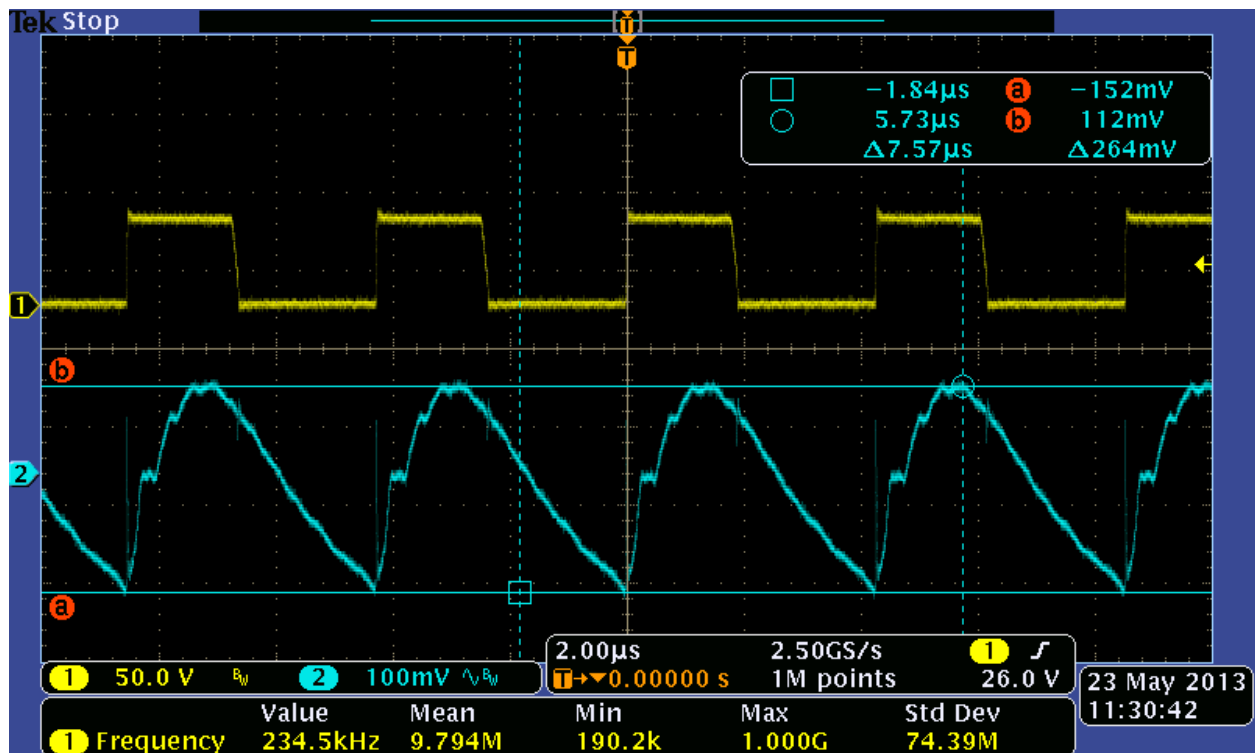
CH1 Primary Switch Node, CH2 Vout, 12V in, 54V out @ 2.5A load current. (318mV p-p Ripple)



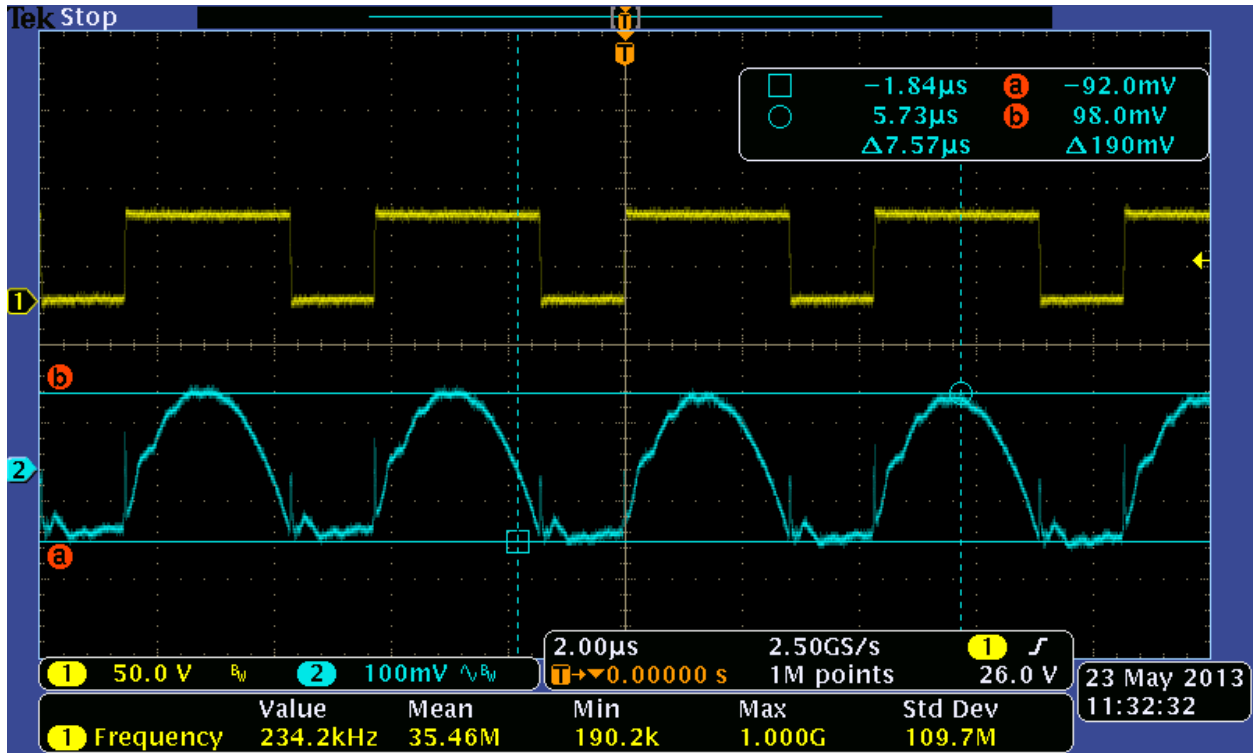
CH1 Primary Switch Node, CH2 Vout, 24V in, 54V out @ no load current. (142mV p-p Ripple)



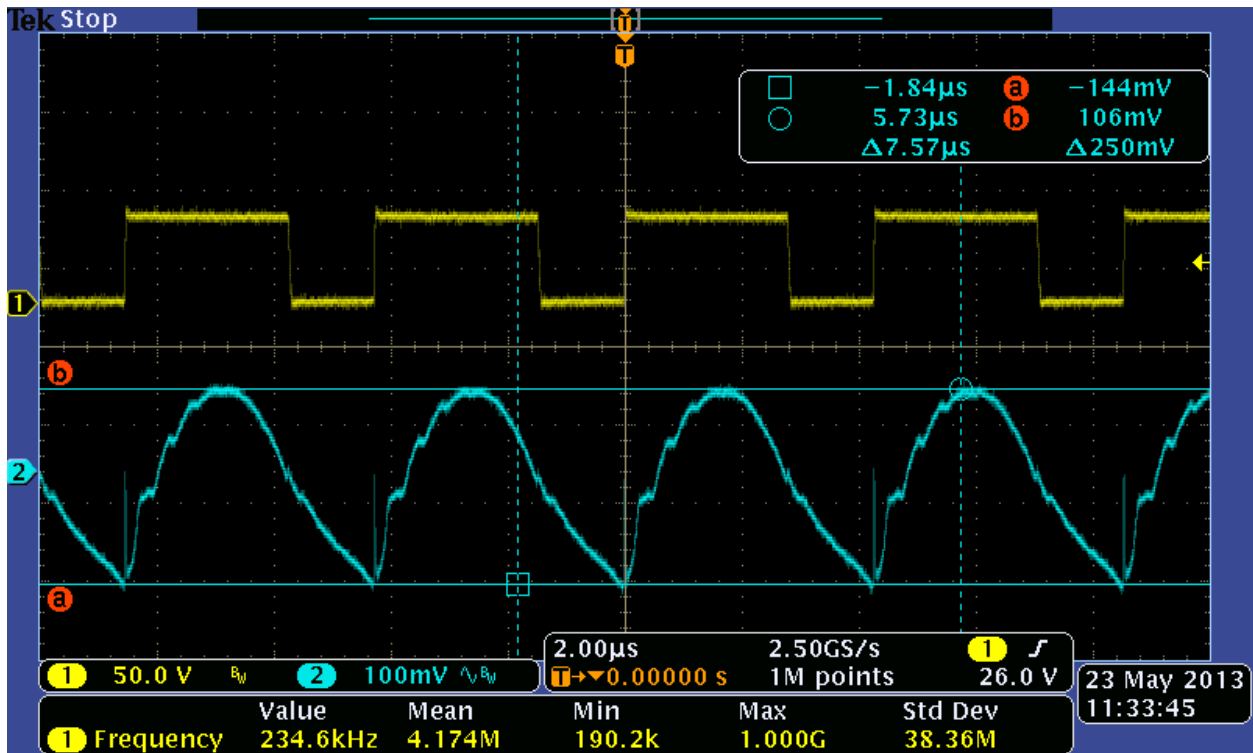
CH1 Primary Switch Node, CH2 Vout, 24V in, 54V out @ 2.5A load current. (264mV p-p Ripple)



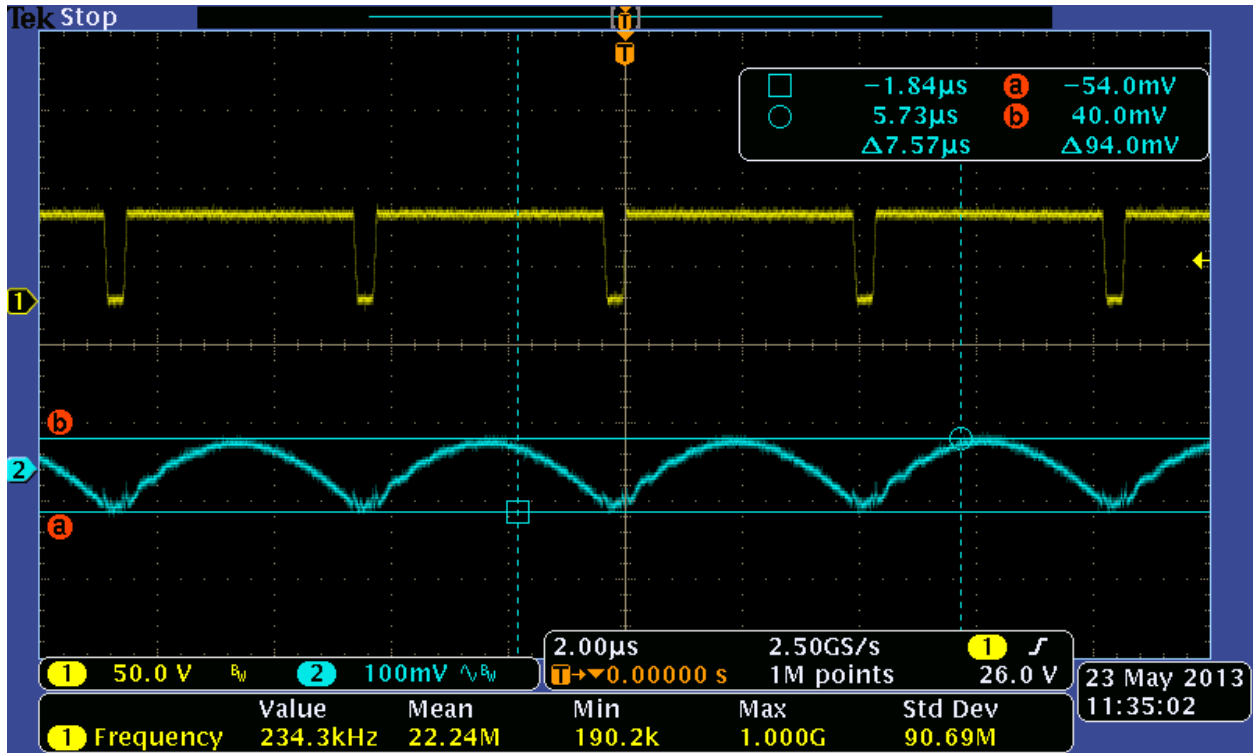
CH1 Primary Switch Node, CH2 Vout, 36V in, 54V out @ no load current. (190mV p-p Ripple)



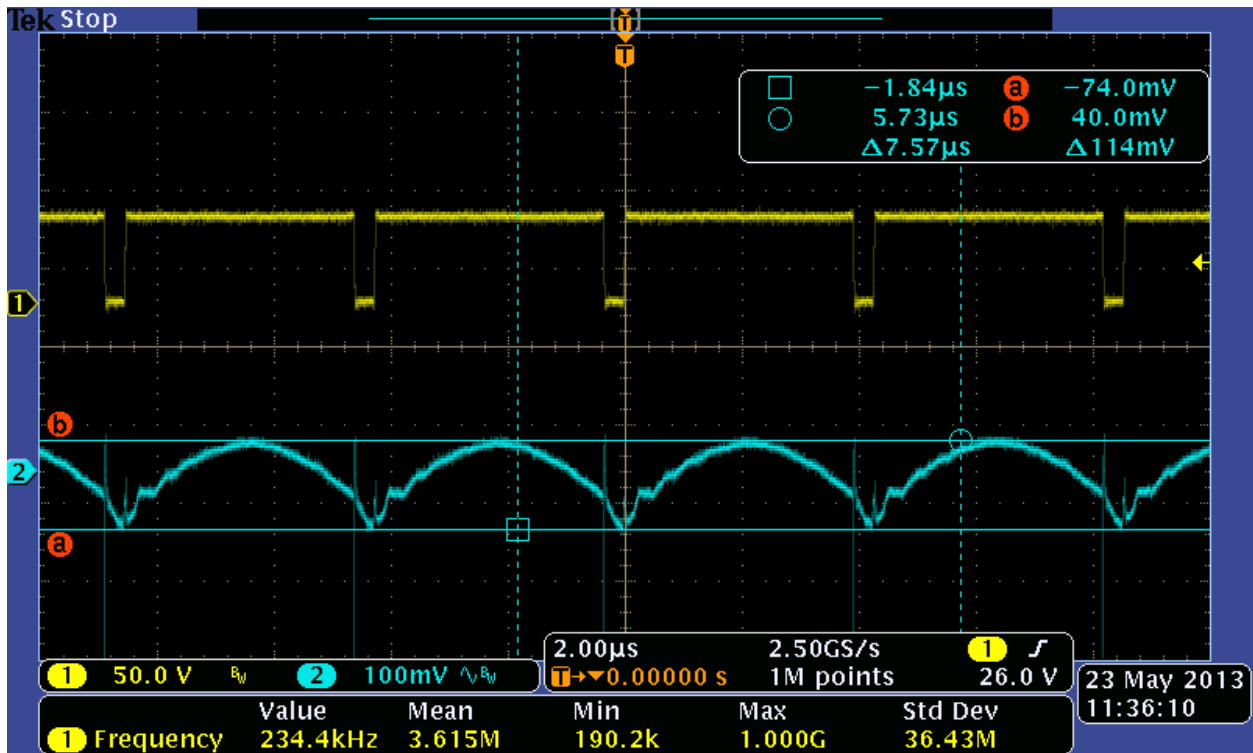
CH1 Primary Switch Node, CH2 Vout, 36V in, 54V out @ 2.5A load current. (250mV p-p Ripple)



CH1 Primary Switch Node, CH2 Vout, 50V in, 54V out @ no load current. (94mV p-p Ripple)

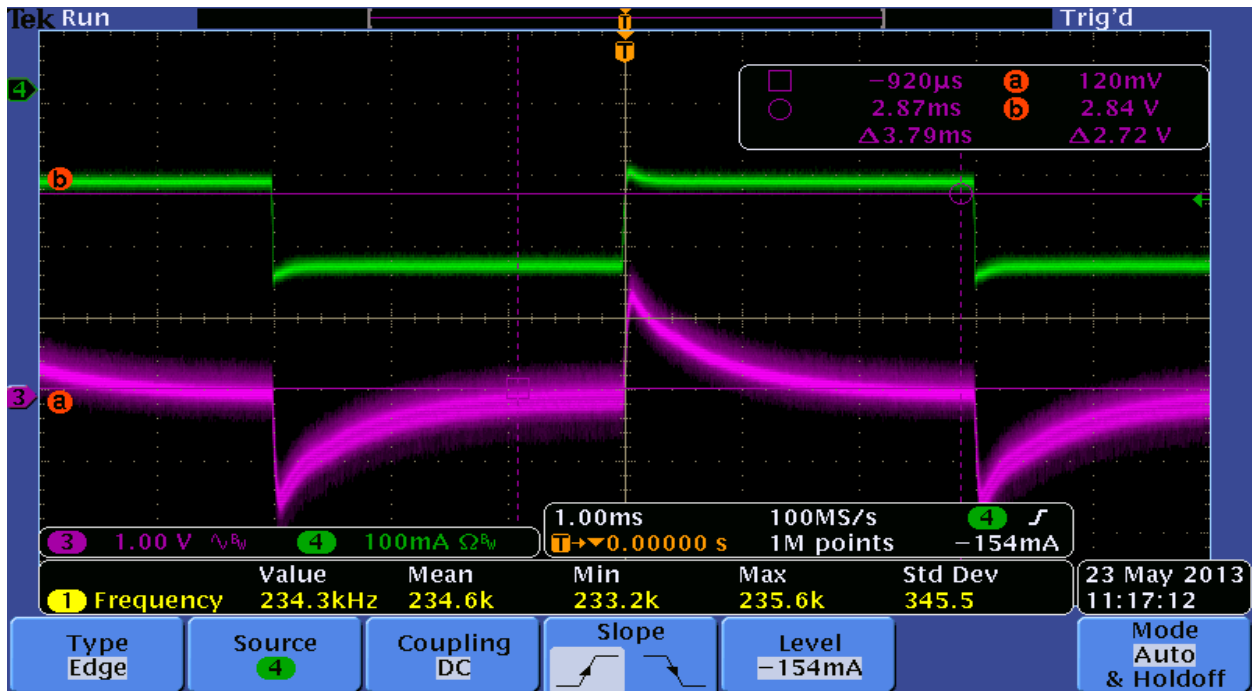


CH1 Primary Switch Node, CH2 Vout, 50V in, 54V out @ 2.5A load current. (114mV p-p Ripple)

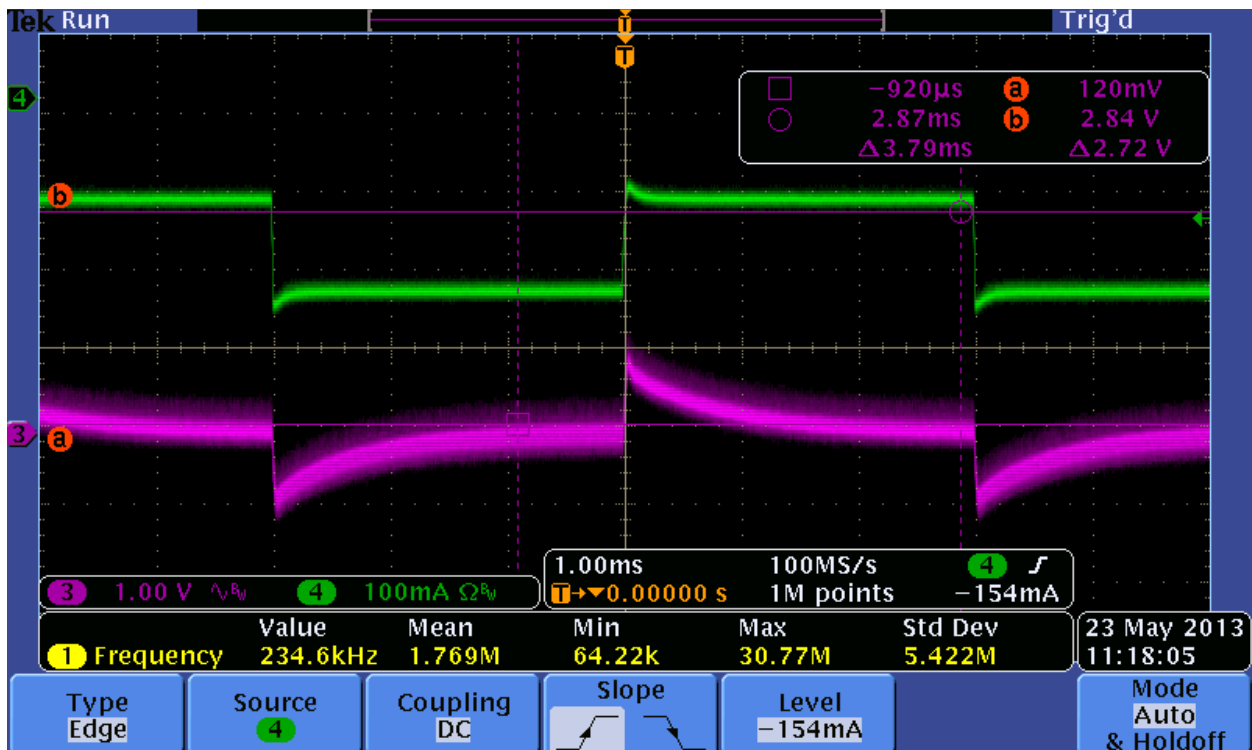


Transient Response Test

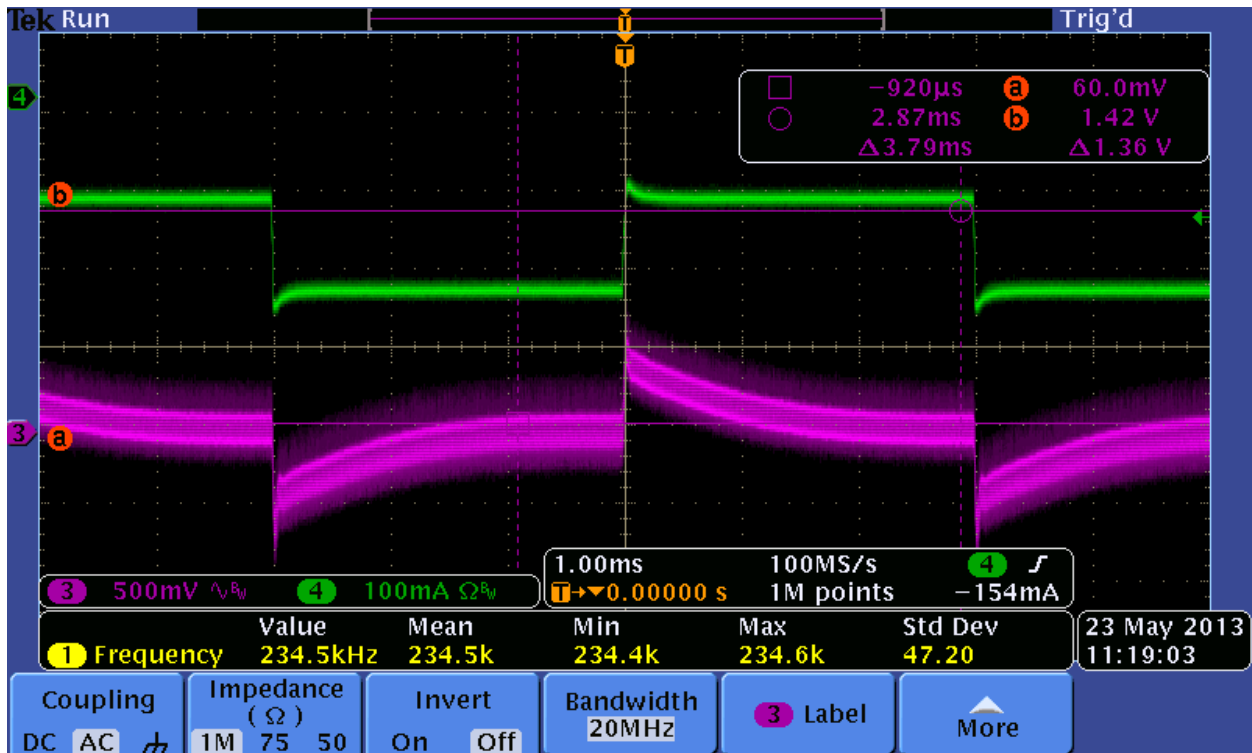
CH3 Vout, CH4 Iout, 12V in @ 1.25A to 2.5A 100mA/us pulse frequency 334 Hz, 50% duty cycle, 54V out.



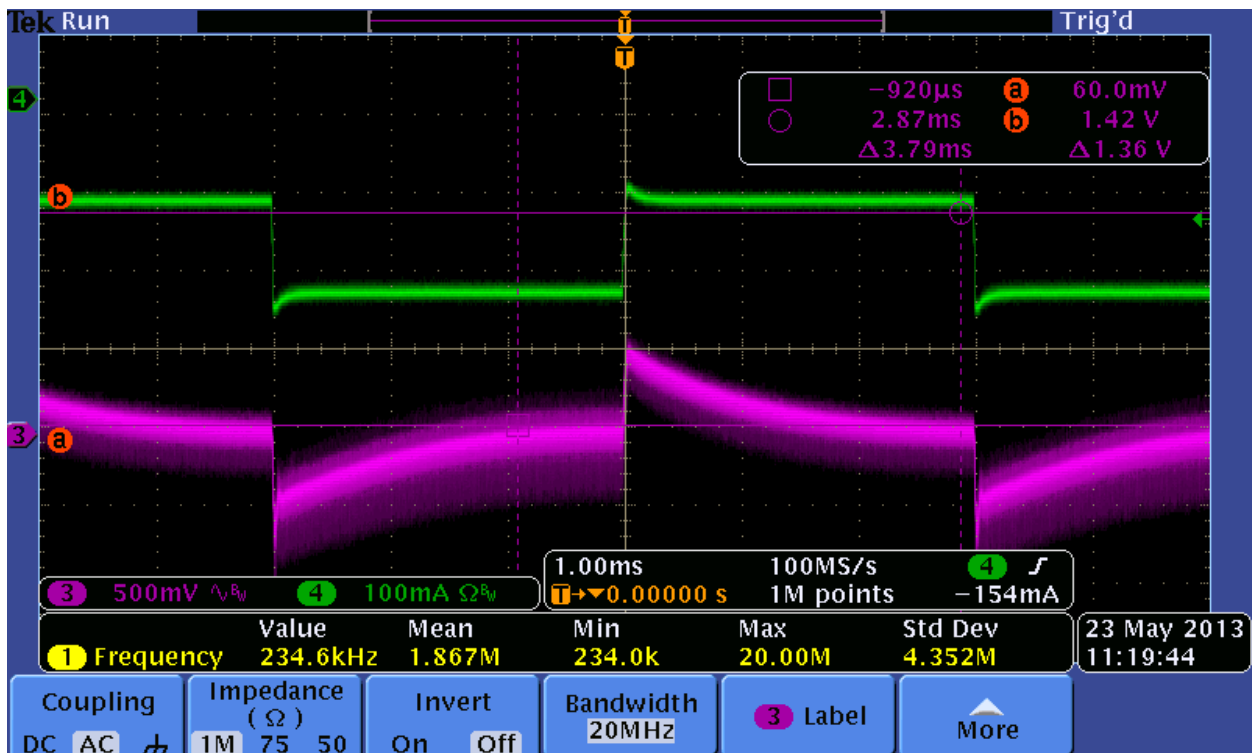
CH3 Vout, CH4, Iout. 24V in @ 1.25A to 2.5A 100mA/us pulse frequency 334 Hz, 50% duty cycle, 54V out



CH3 Vout, CH4, Iout, 36V in @ 1.25A to 2.5A 100mA/us pulse frequency 334 Hz, 50% duty cycle, 54V out

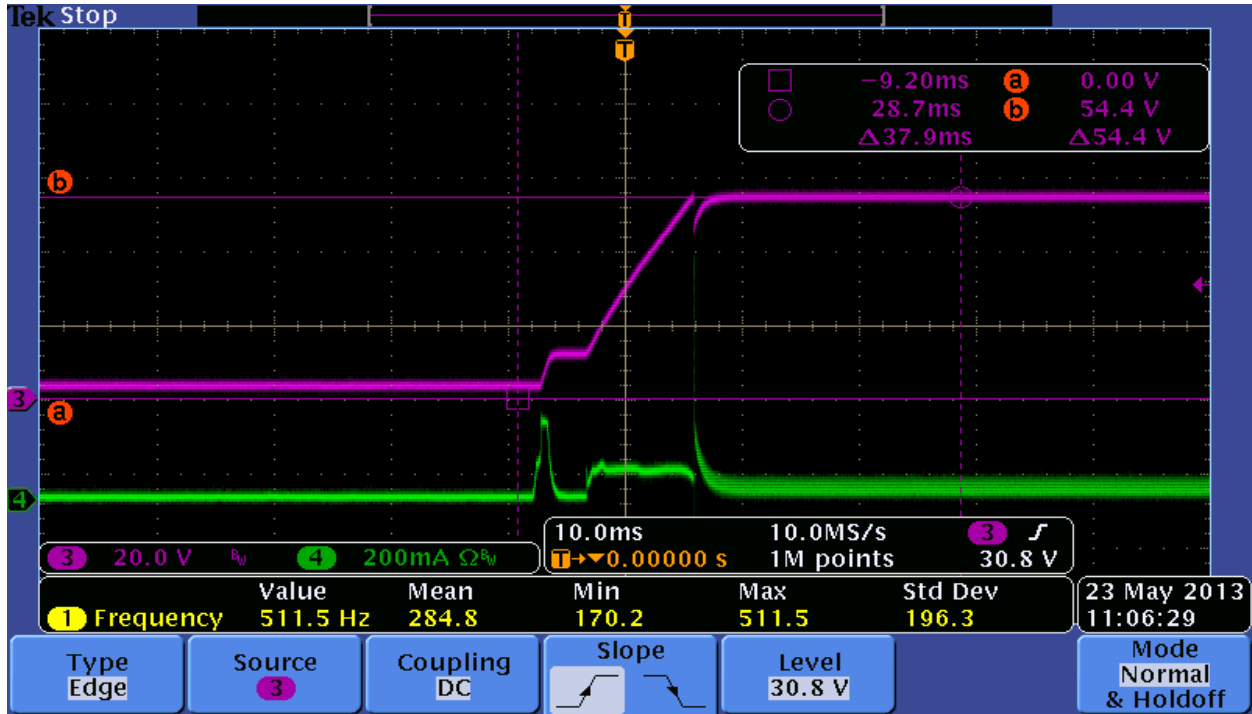


CH3 Vout, CH4, Iout, 50V in @ 1.25A to 2.5A 100mA/us pulse frequency 334 Hz, 50% duty cycle, 54V out

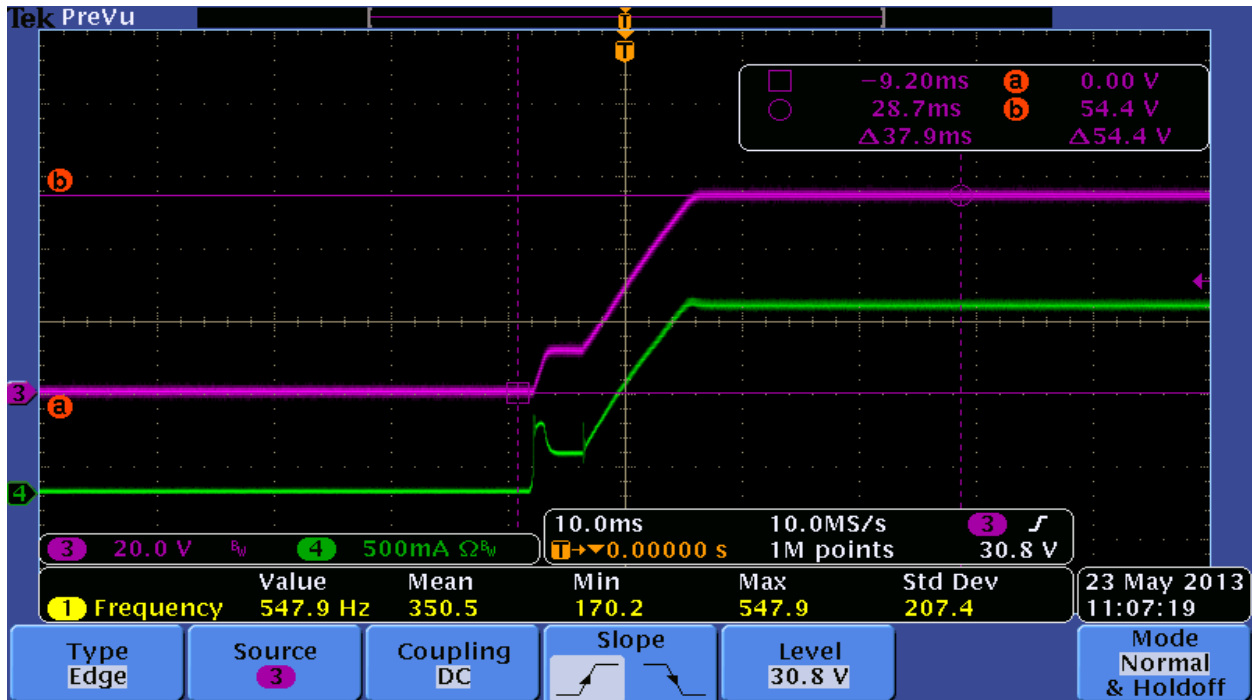


Startup Test

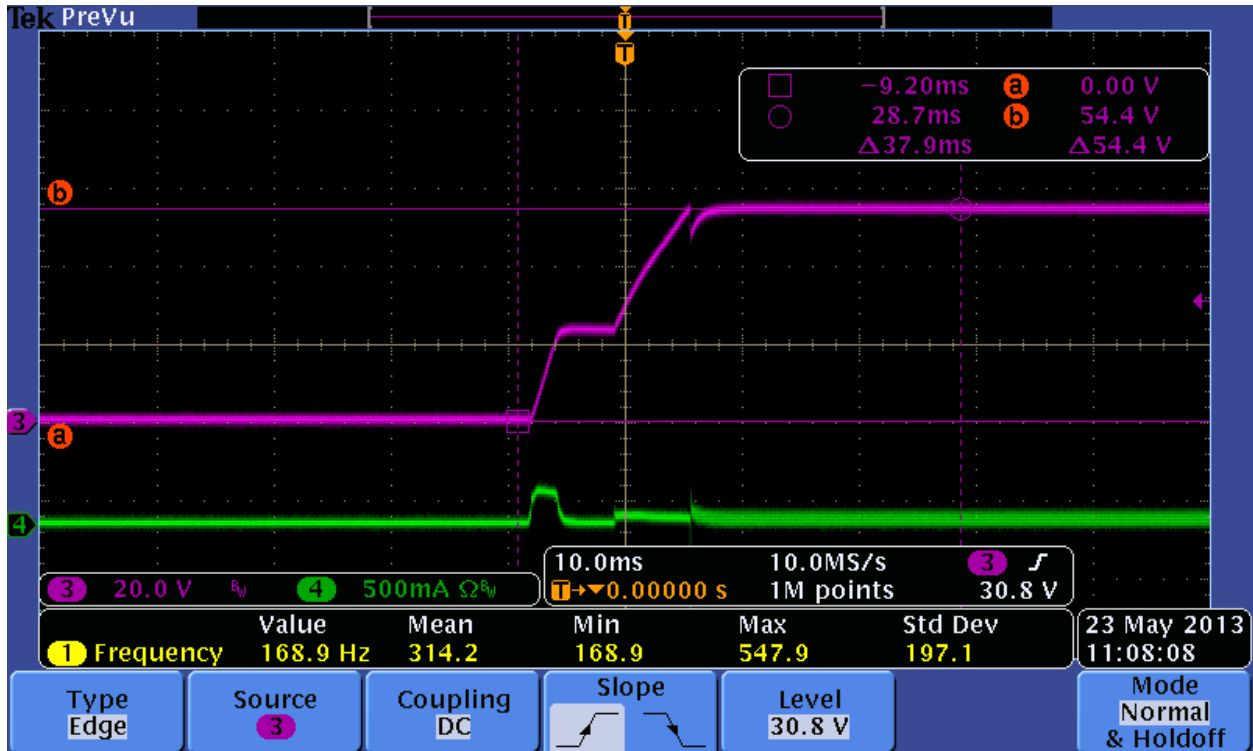
CH3 Vout, CH4 lin, 12V in, 54V out @ no load current.



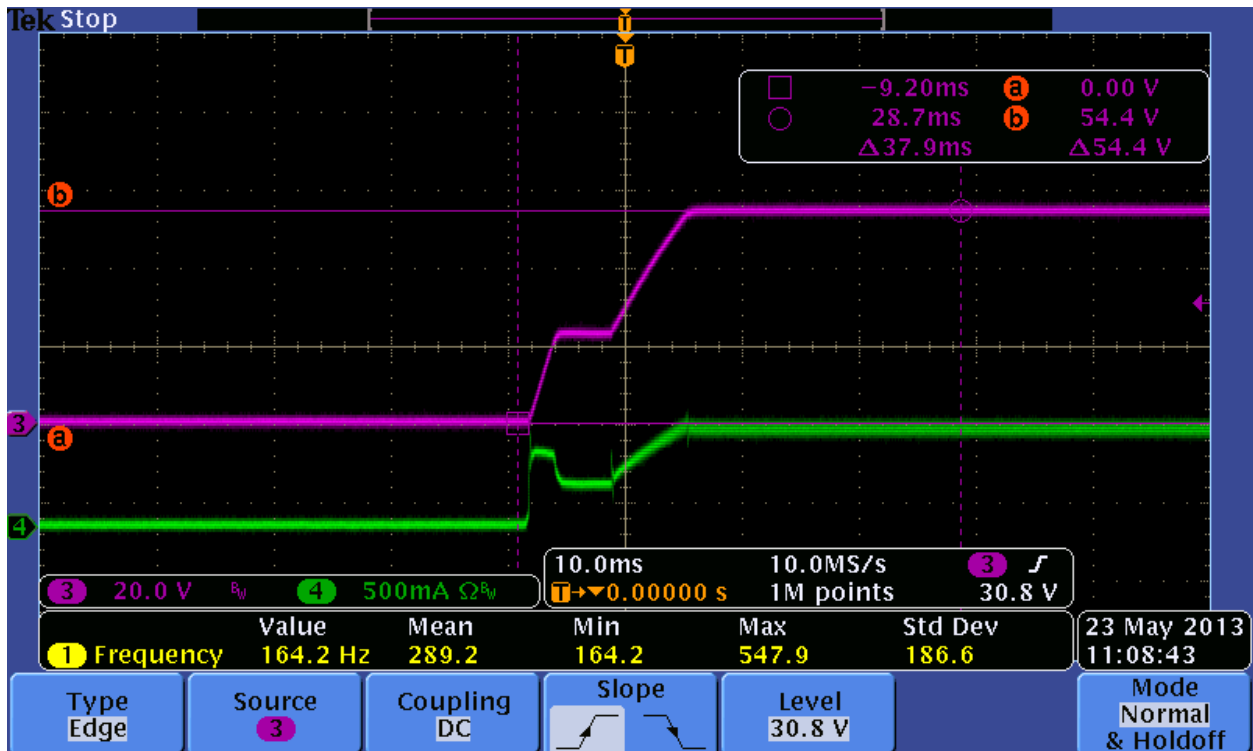
CH3 Vout, CH4 lin, 12V in, 54V out @ 2.5A load current.



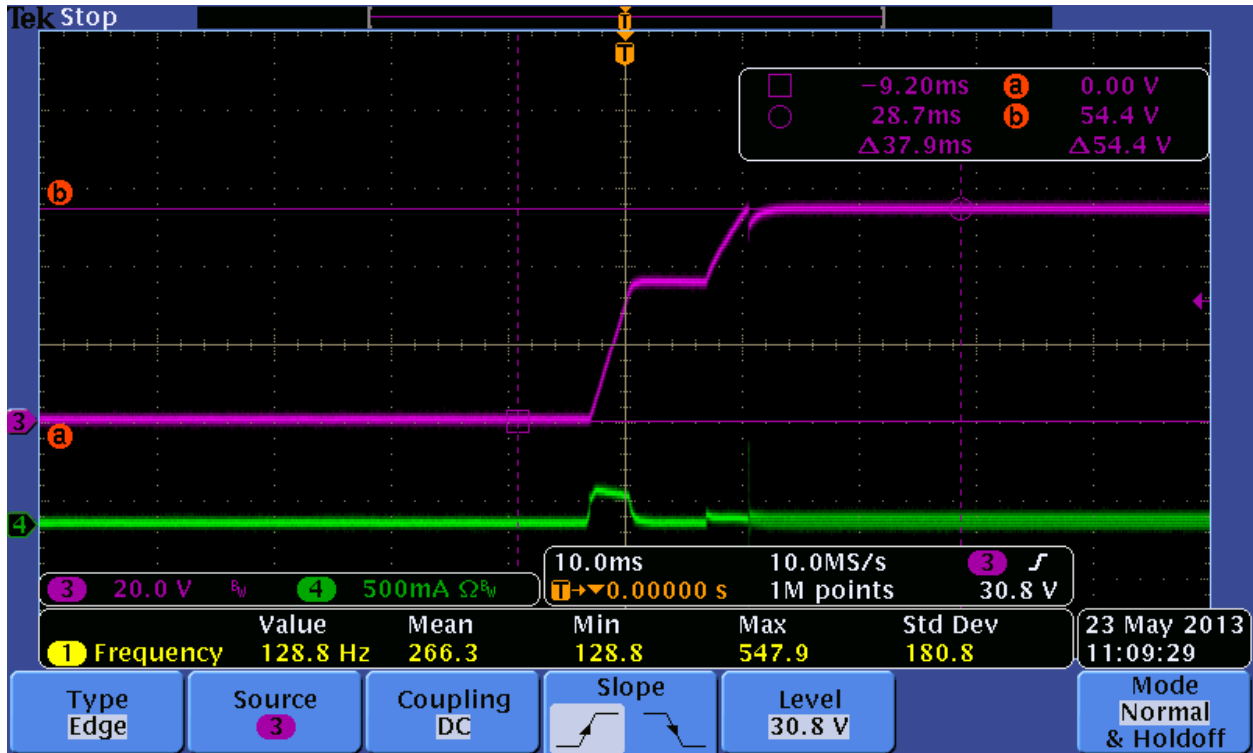
CH3 Vout, CH4 lin, 24V in, 54V out @ no load current.



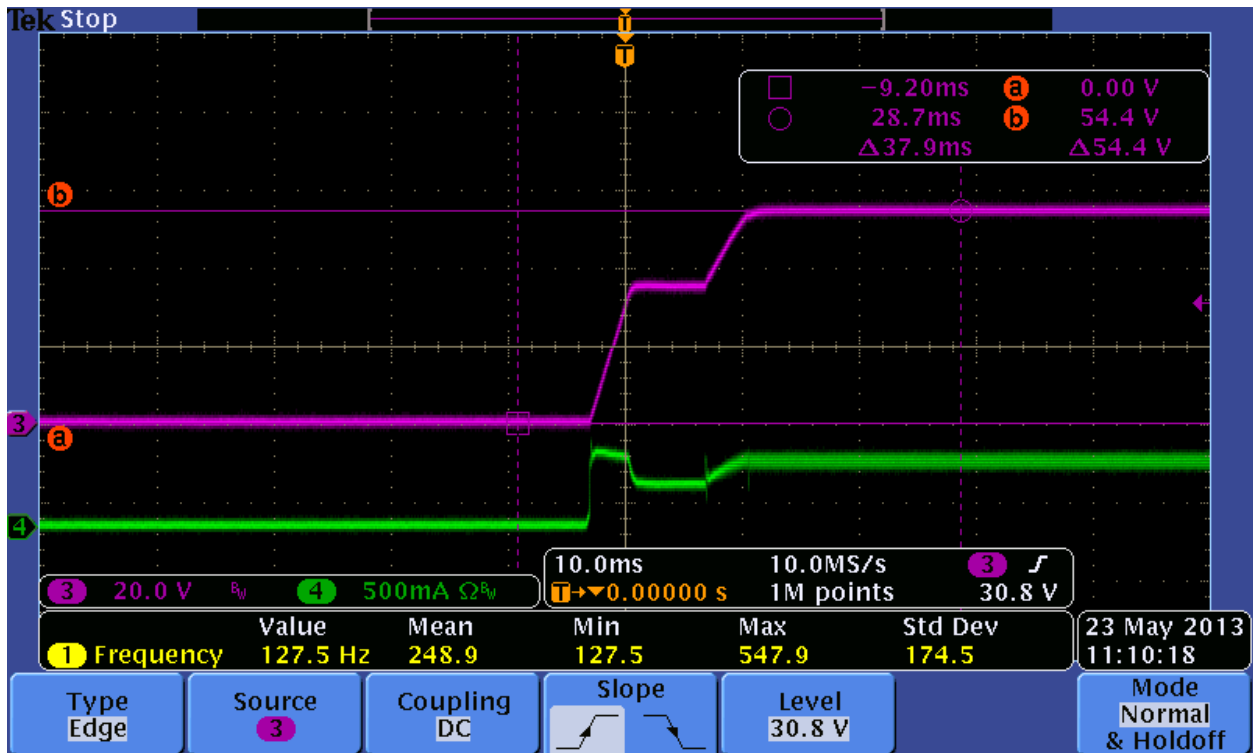
CH3 Vout, CH4 lin, 24V in, 54V out @ 2.5A load current.



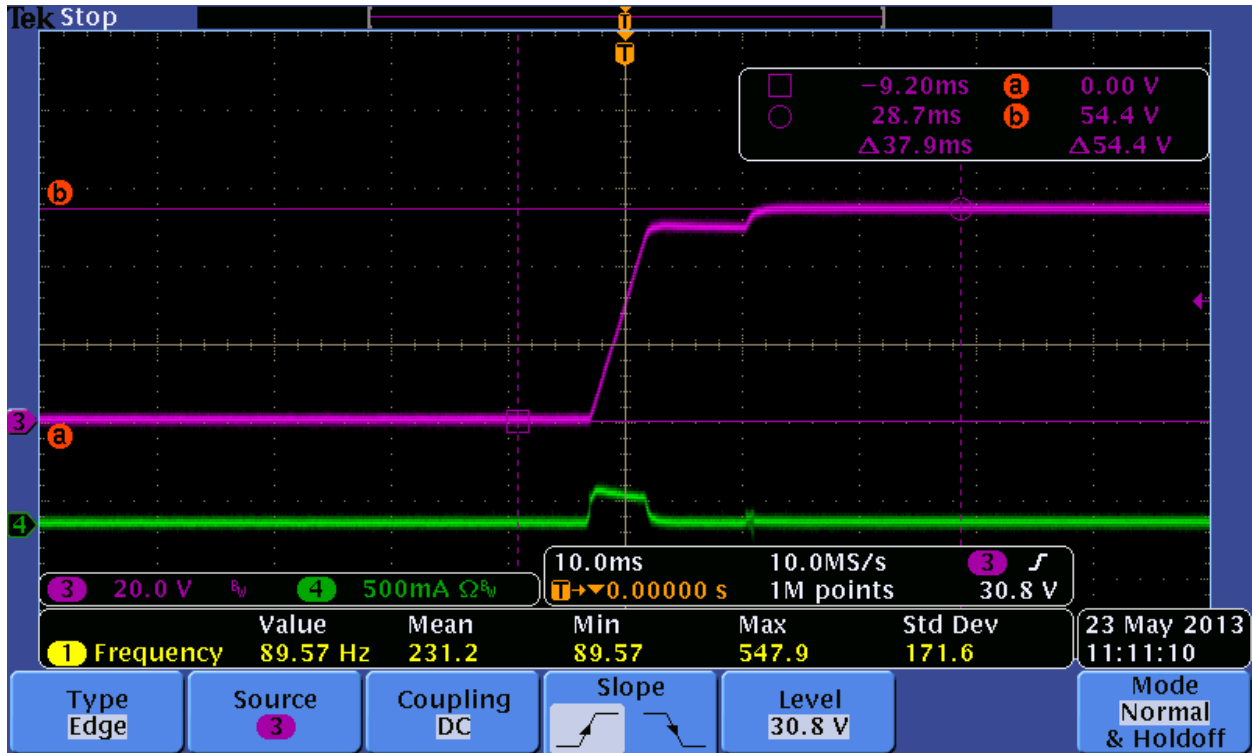
CH3 Vout, CH4 lin, 36V in, 54V out @ no load current.



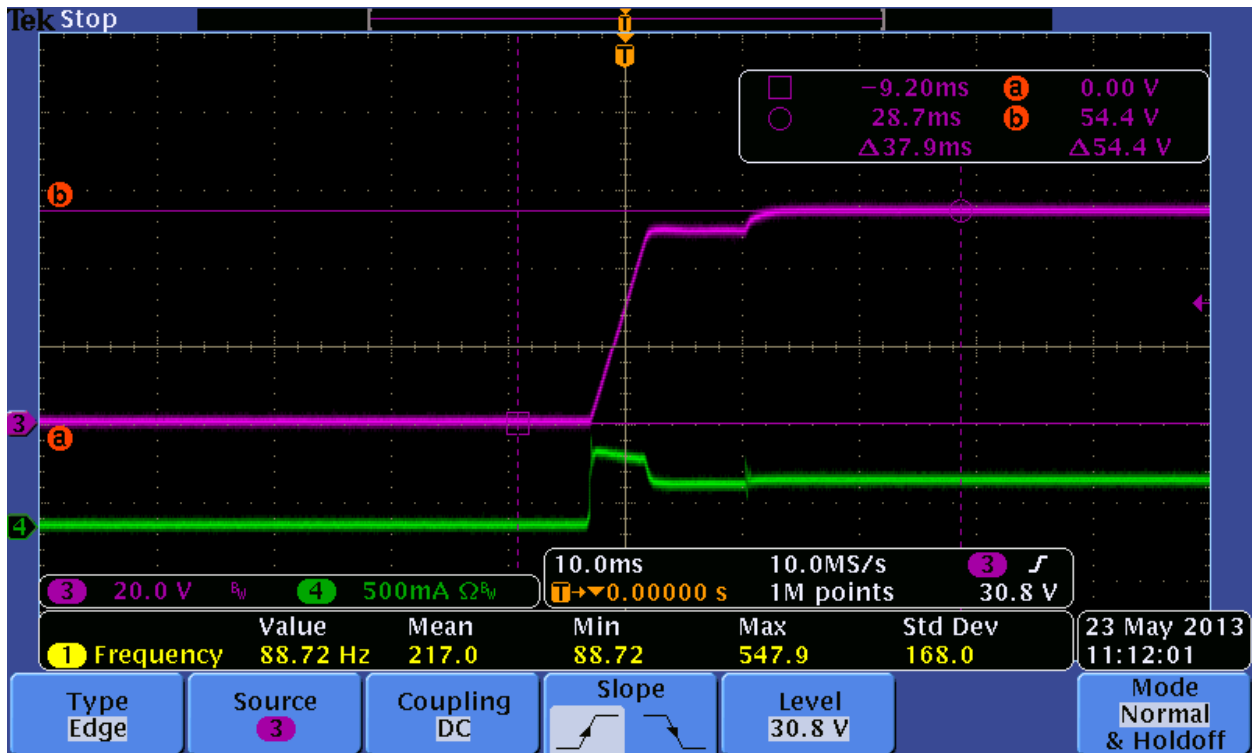
CH3 Vout, CH4 lin, 36V in, 54V out @ 2.5A load current.



CH3 Vout, CH4 Iin, 50V in, 54V out @ no load current.



CH3 Vout, CH4 Iin, 50V in, 54V out @ 2.5A load current.



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