

Test Report of PMP10565

(Flybuck with LM5160)

17 Dec. 2014



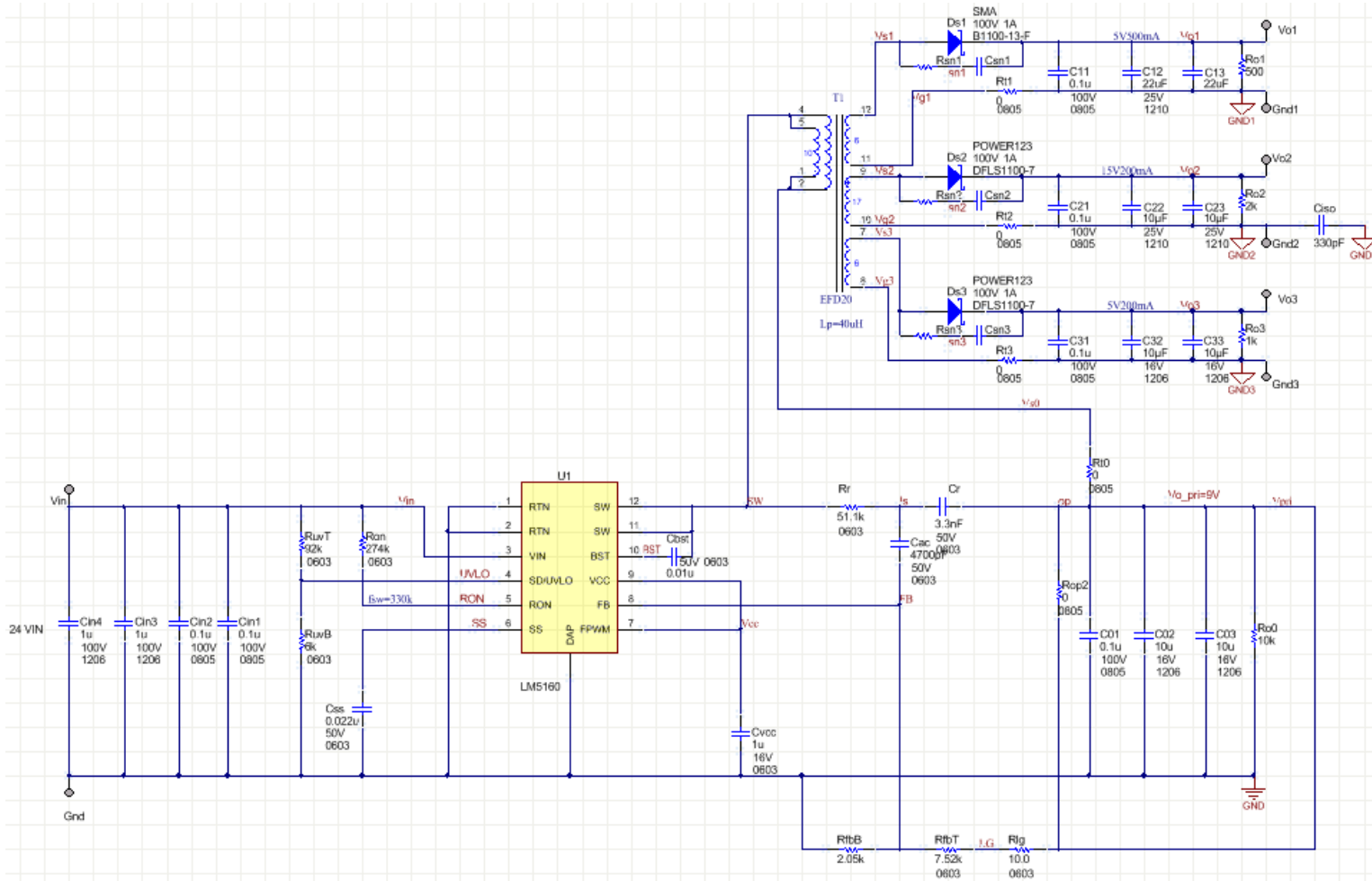
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1) Design Specifications

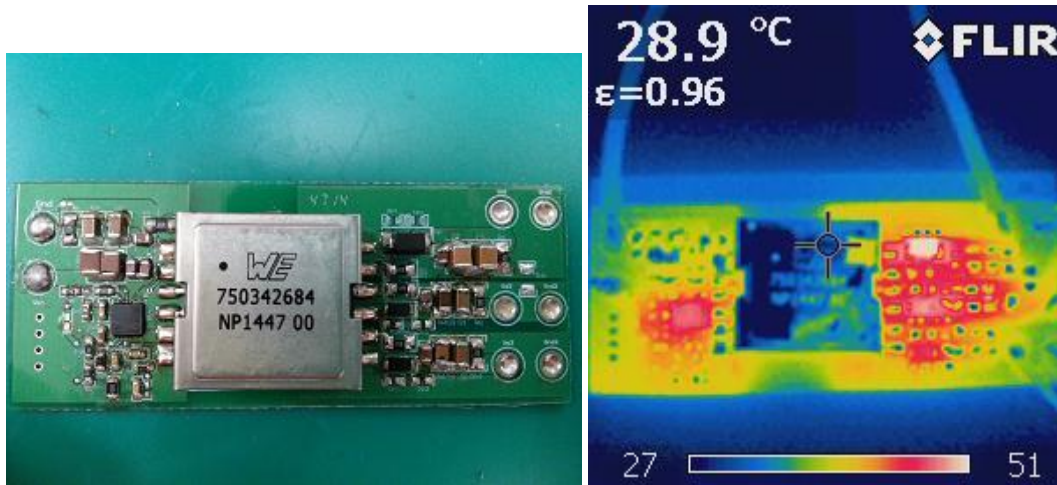
Vin	24Vdc
Vout1	5Vdc
Iout1	0.5A
Vout2	15Vdc
Iout2	0.2A
Vout3	5Vdc
Iout3	0.2A
Switching frequency	330k

2) Circuit Schematic



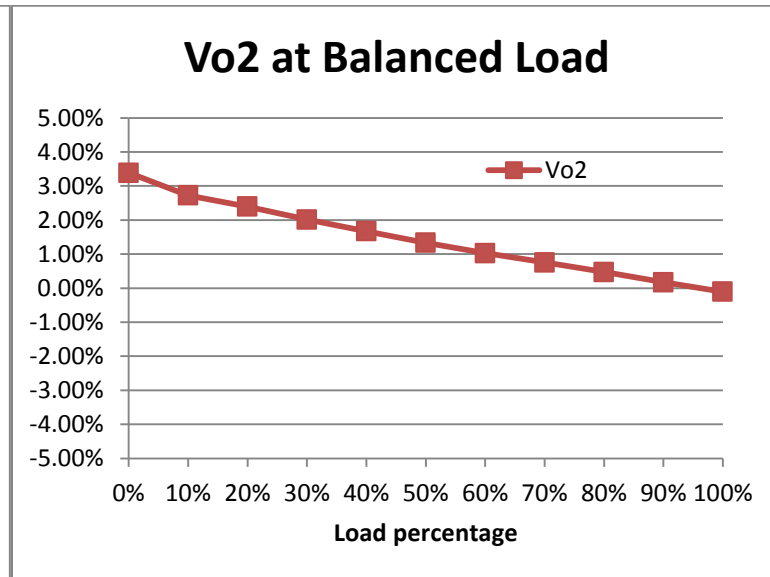
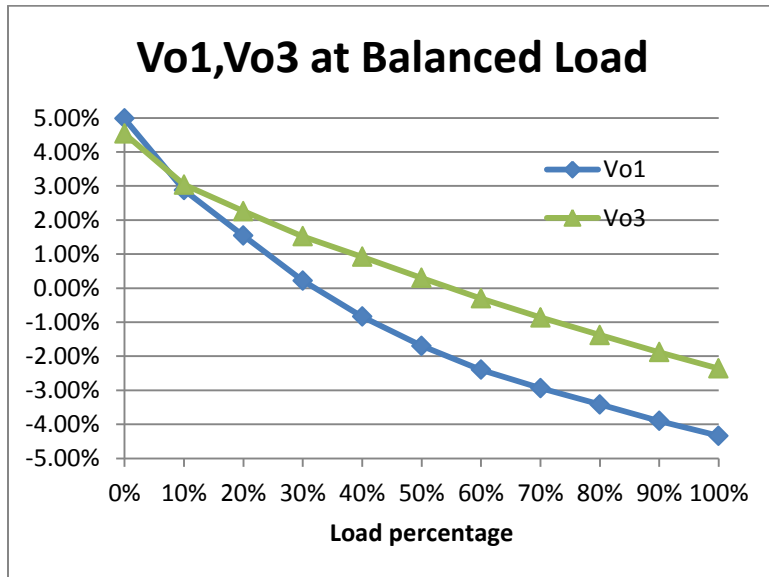
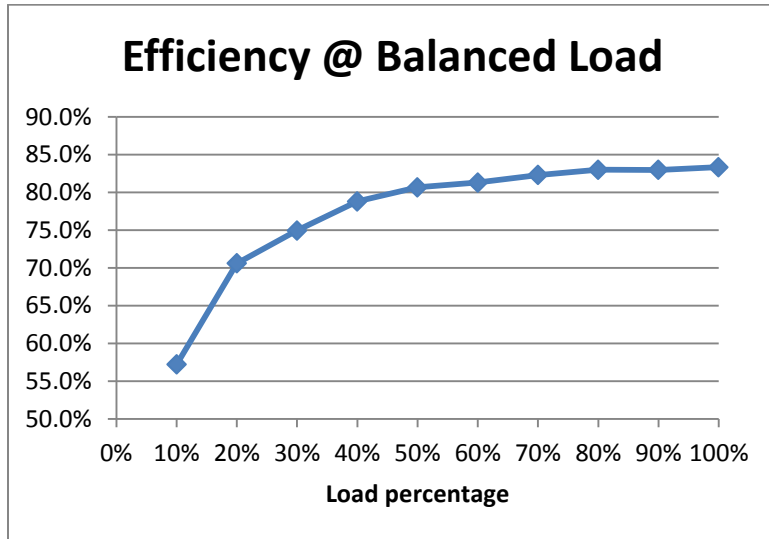
3) Typical Performances

3.1) Board and Thermal

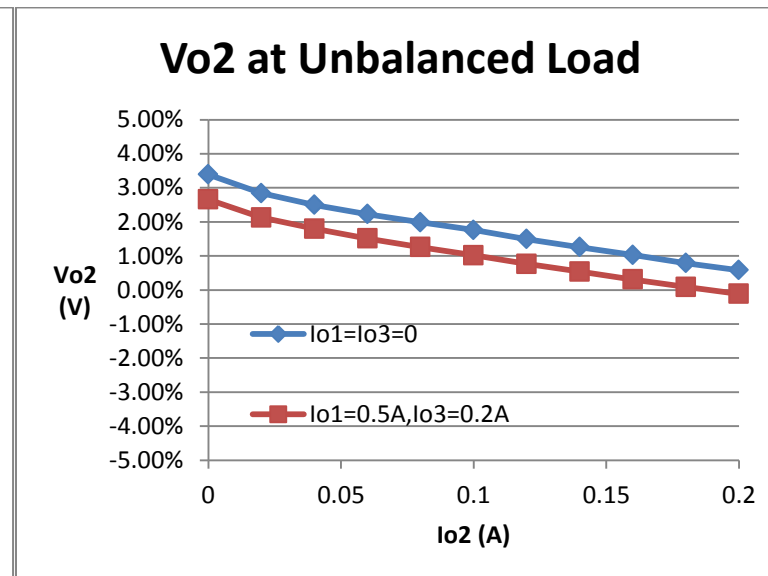
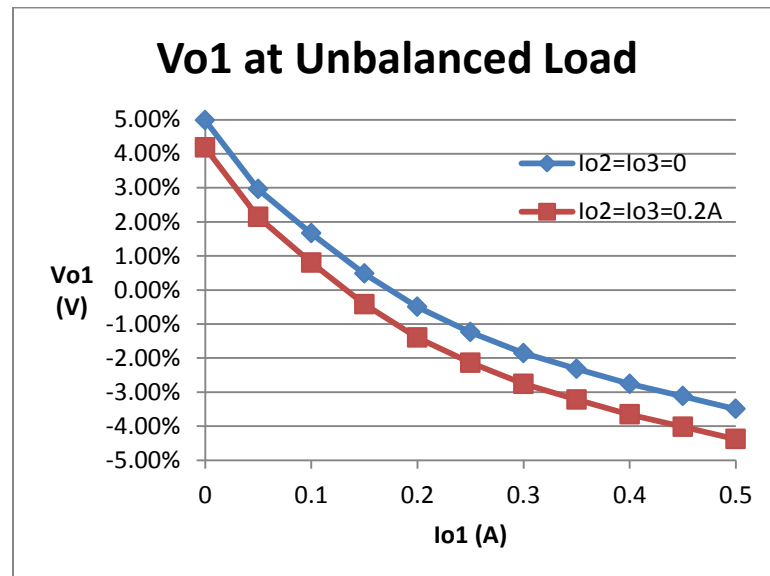


Board Dimensions: 80mm x 30mm

3.2) Efficiency and Cross Regulation



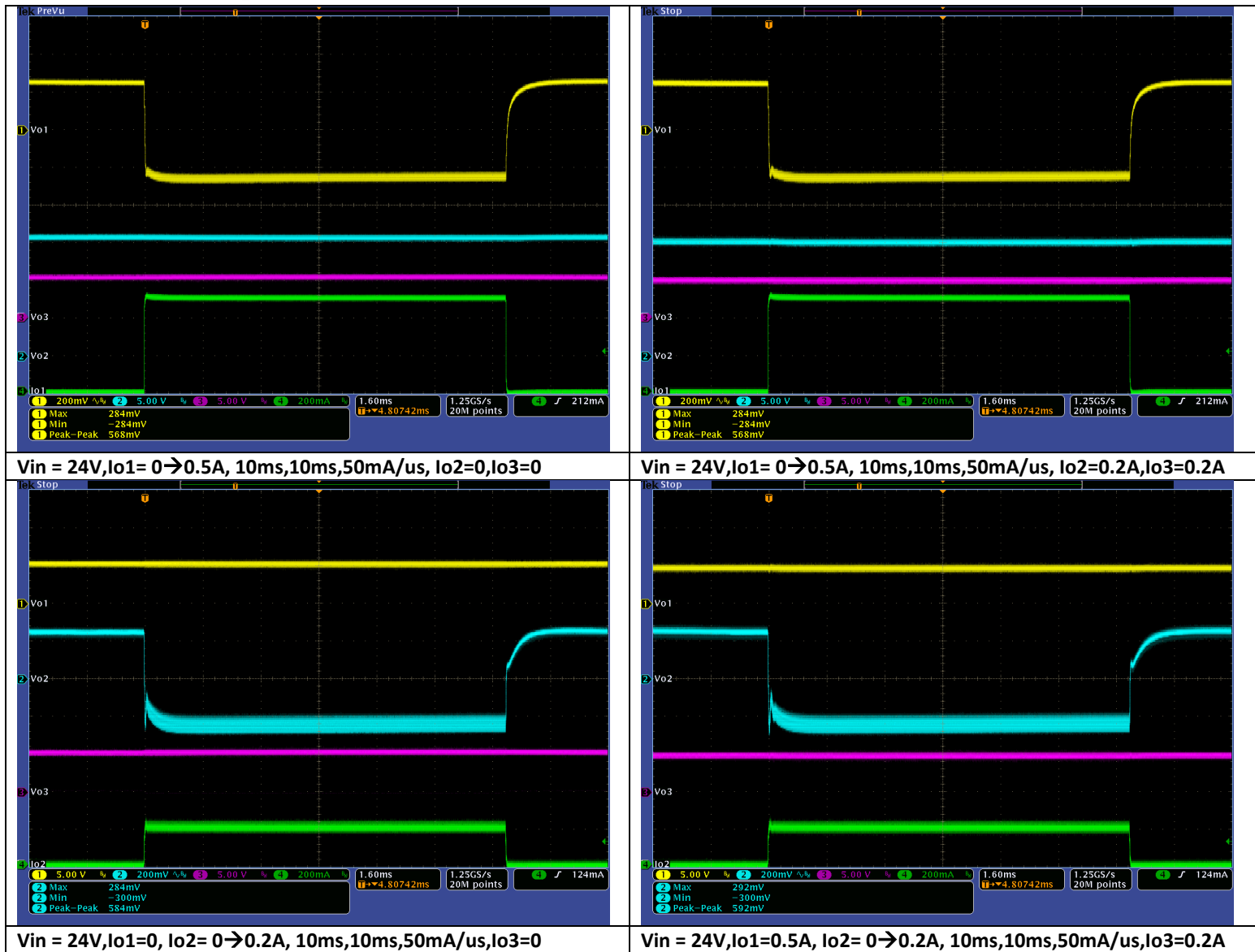
Vin	Iin	Vo1	Io1	Vo2	Io2	Vo3	Io3	Pst/eff.
V	mA	V	A	V	A	V	A	mW/%
24	19.2	5.249	0	15.508	0	5.227	0	462mW
24	48.7	5.144	0.05	15.409	0.02	5.152	0.02	57.2%
24	78.3	5.077	0.1	15.359	0.04	5.113	0.04	70.6%
24	109.8	5.011	0.15	15.302	0.06	5.076	0.06	74.9%
24	138.3	4.958	0.2	15.251	0.08	5.046	0.08	78.8%
24	167.9	4.915	0.25	15.200	0.1	5.015	0.1	80.7%
24	198.9	4.880	0.3	15.154	0.12	4.985	0.12	81.3%
24	228.3	4.853	0.35	15.113	0.14	4.957	0.14	82.3%
24	257.7	4.829	0.4	15.071	0.16	4.931	0.16	83.0%
24	288.8	4.805	0.45	15.026	0.18	4.906	0.18	83.0%
24	318.3	4.783	0.5	14.984	0.2	4.882	0.2	83.3%

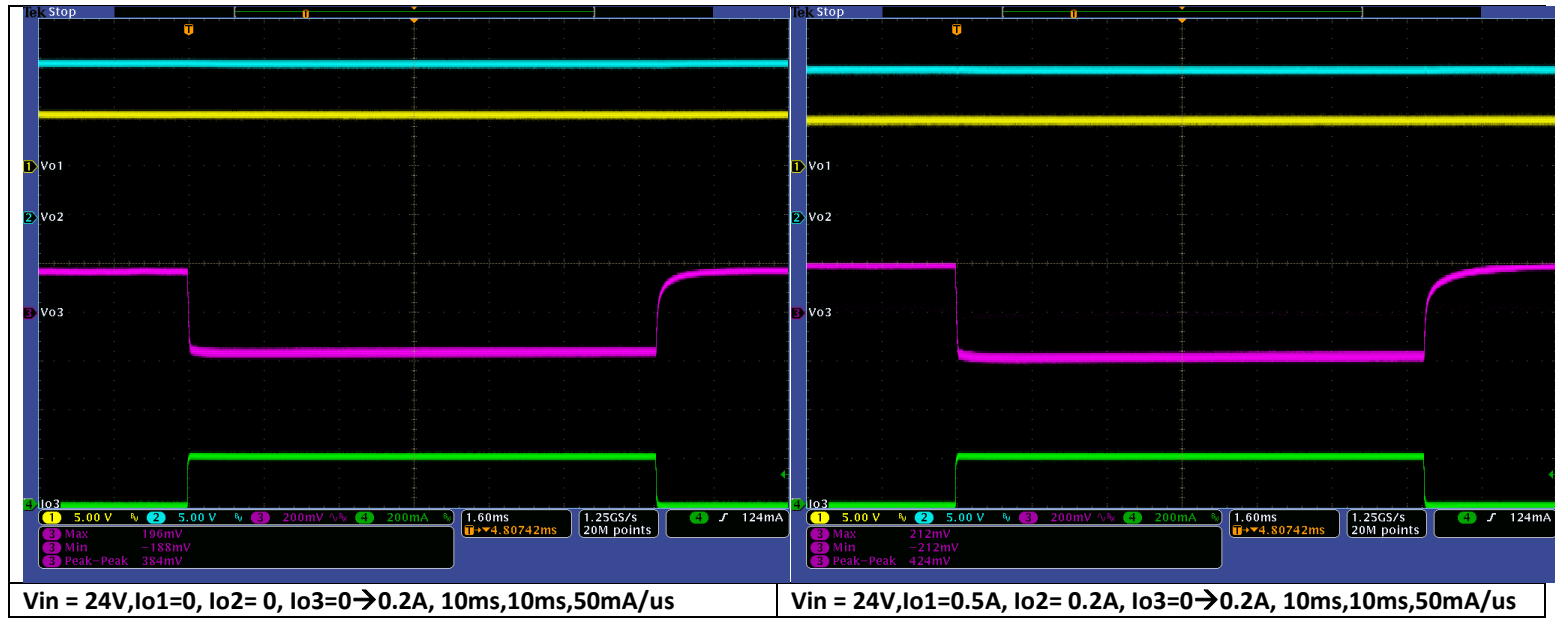


Vin	Iin	Vo1	Io1	Vo2	Io2	Vo3	Io3
V	mA	V	A	V	A	V	A
24	19.2	5.249	0	15.509	0	5.228	0
24	30.8	5.148	0.05	15.487	0	5.216	0
24	42.4	5.083	0.1	15.474	0	5.214	0
24	54.4	5.024	0.15	15.468	0	5.212	0
24	66.1	4.975	0.2	15.465	0	5.211	0
24	77.6	4.938	0.25	15.463	0	5.209	0
24	89.7	4.907	0.3	15.458	0	5.206	0
24	101.2	4.884	0.35	15.451	0	5.203	0
24	112.9	4.862	0.4	15.442	0	5.201	0
24	124.7	4.844	0.45	15.432	0	5.199	0
24	136.4	4.825	0.5	15.422	0	5.198	0
24	200.0	5.209	0	15.065	0.2	4.915	0.2
24	212.3	5.107	0.05	15.057	0.2	4.913	0.2
24	224.0	5.040	0.1	15.050	0.2	4.910	0.2
24	236.0	4.979	0.15	15.042	0.2	4.907	0.2
24	248.0	4.930	0.2	15.034	0.2	4.904	0.2
24	259.0	4.893	0.25	15.026	0.2	4.900	0.2
24	272.0	4.862	0.3	15.018	0.2	4.897	0.2
24	283.0	4.839	0.35	15.009	0.2	4.894	0.2
24	295.0	4.817	0.4	15.000	0.2	4.889	0.2
24	307.0	4.799	0.45	14.992	0.2	4.886	0.2
24	318.0	4.781	0.5	14.983	0.2	4.883	0.2
24	19.0	5.249	0	15.509	0	5.224	0
24	32.3	5.244	0	15.426	0.02	5.223	0
24	45.3	5.244	0	15.375	0.04	5.221	0
24	59.4	5.238	0	15.334	0.06	5.218	0
24	72.5	5.237	0	15.298	0.08	5.218	0

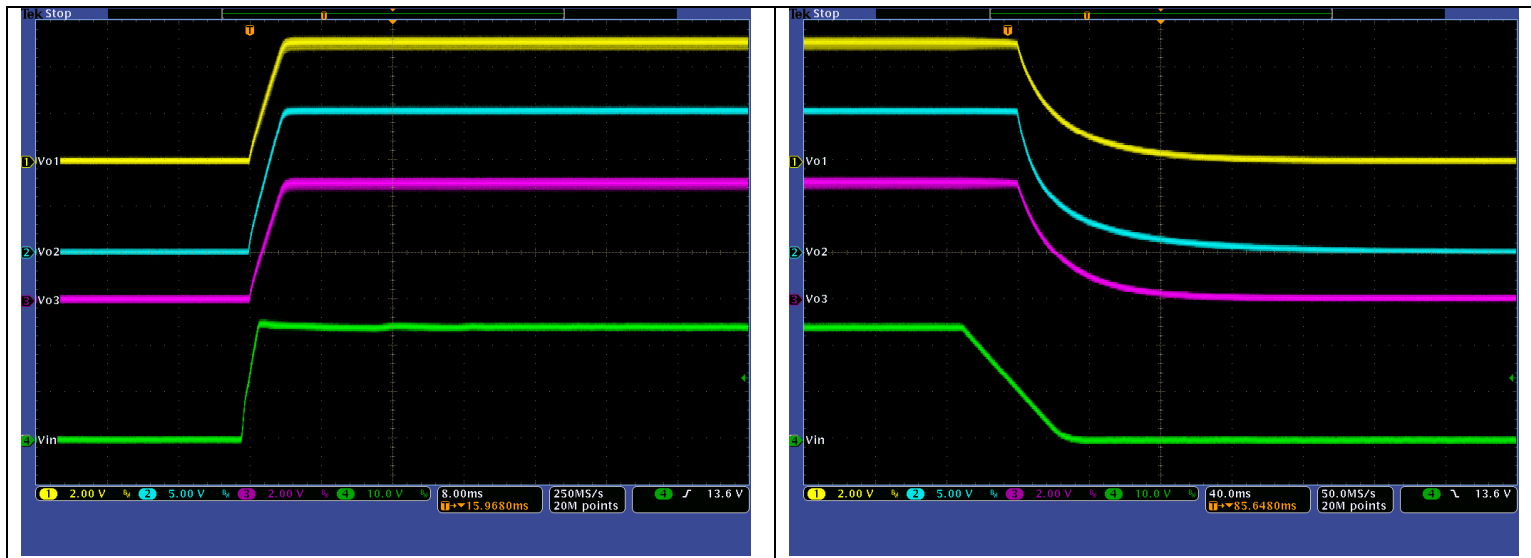
24	85.5	5.235	0	15.264	0.1	5.218	0
24	99.7	5.236	0	15.224	0.12	5.214	0
24	112.7	5.235	0	15.189	0.14	5.214	0
24	125.9	5.228	0	15.154	0.16	5.212	0
24	139.8	5.228	0	15.118	0.18	5.213	0
24	153.0	5.221	0	15.087	0.2	5.212	0
24	184.0	4.816	0.5	15.399	0	4.909	0.2
24	197.0	4.809	0.5	15.319	0.02	4.909	0.2
24	210.0	4.802	0.5	15.270	0.04	4.905	0.2
24	224.0	4.801	0.5	15.227	0.06	4.903	0.2
24	237.0	4.796	0.5	15.189	0.08	4.899	0.2
24	251.0	4.798	0.5	15.153	0.1	4.898	0.2
24	264.0	4.791	0.5	15.115	0.12	4.894	0.2
24	278.0	4.791	0.5	15.081	0.14	4.891	0.2
24	292.0	4.781	0.5	15.046	0.16	4.886	0.2
24	305.0	4.780	0.5	15.013	0.18	4.885	0.2
24	318.0	4.776	0.5	14.983	0.2	4.881	0.2

3.3) Dynamic Response

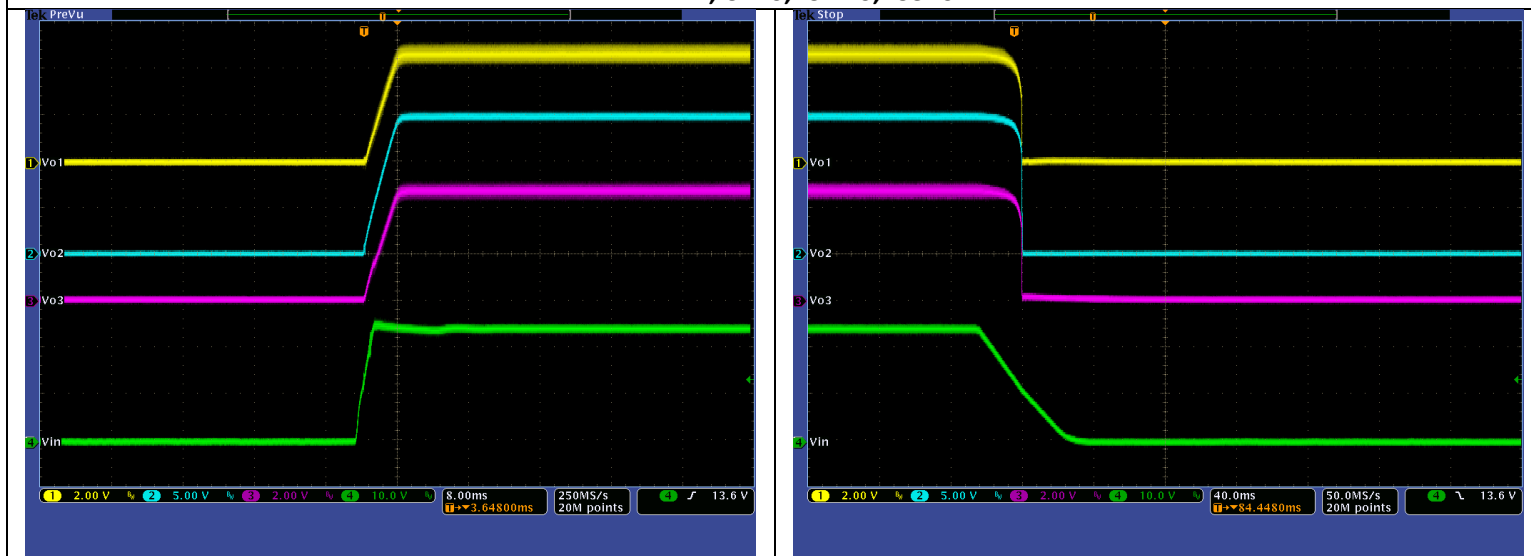




3.4) Start up and Shutdown

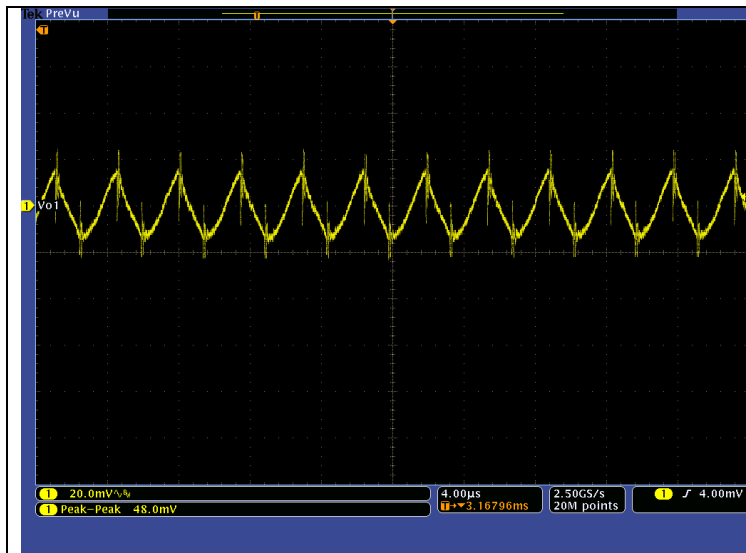


Vin = 24V, Io1=0, Io2= 0, Io3=0

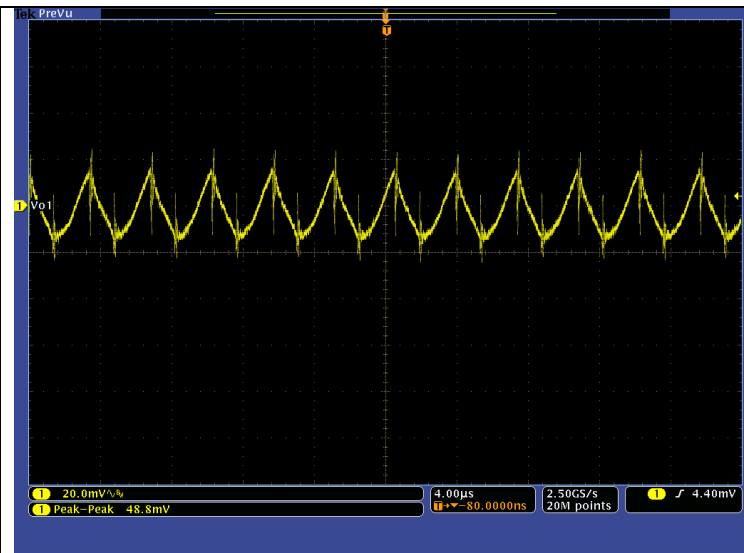


Vin = 24V, Io1=0.5A, Io2= 0.2A, Io3=0.2A

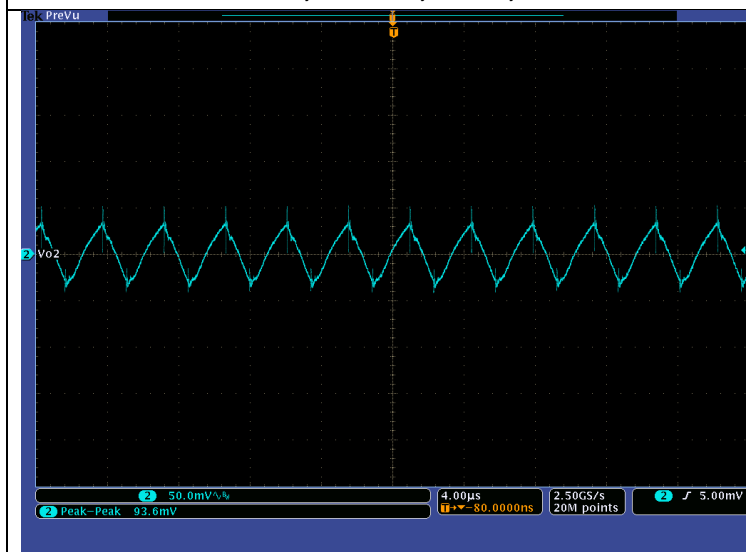
3.5) Output Ripple



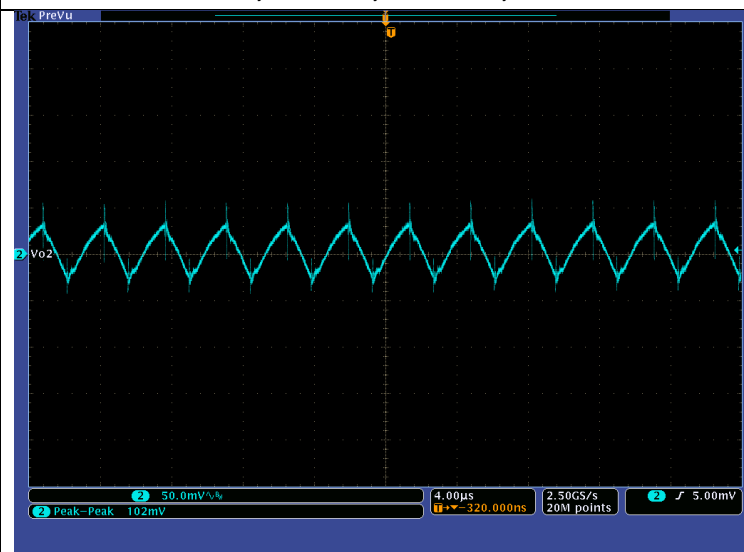
Vin = 24V, Io1=0.5A, Io2= 0, Io3=0



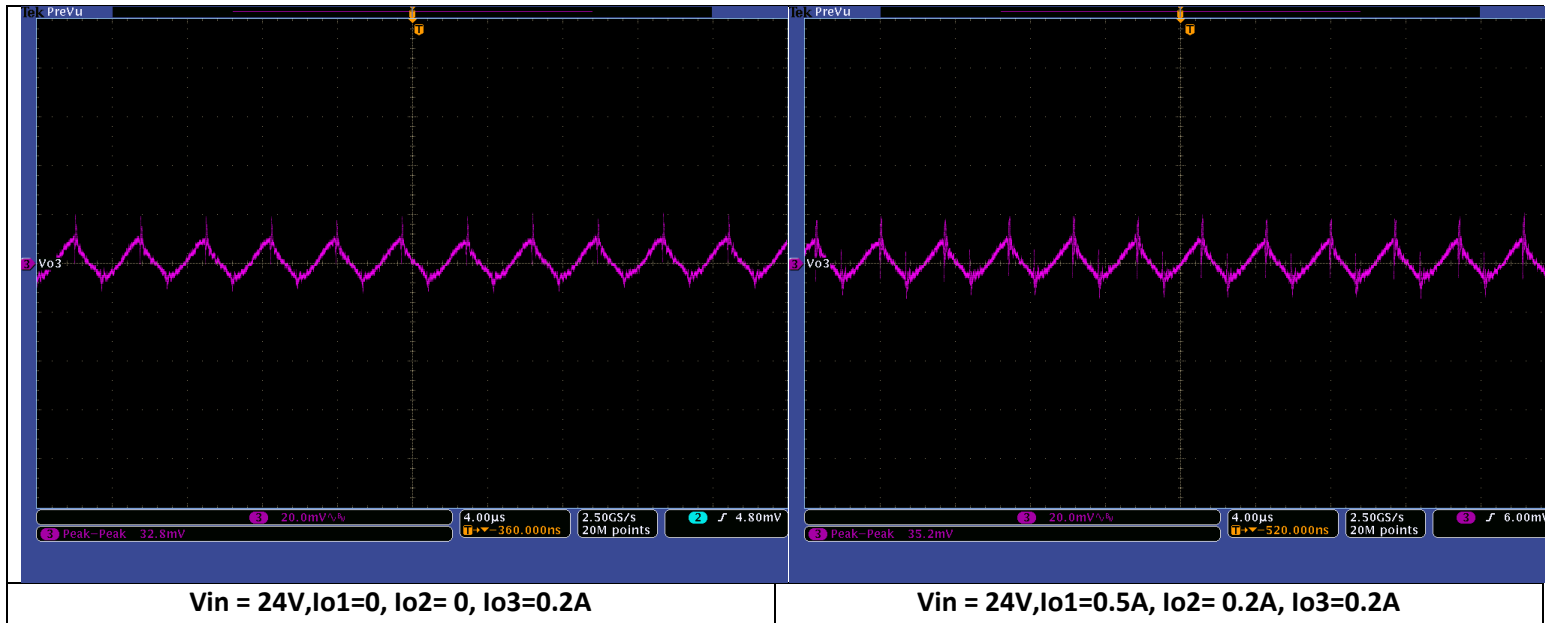
Vin = 24V, Io1=0.5A, Io2= 0.2A, Io3=0.2A



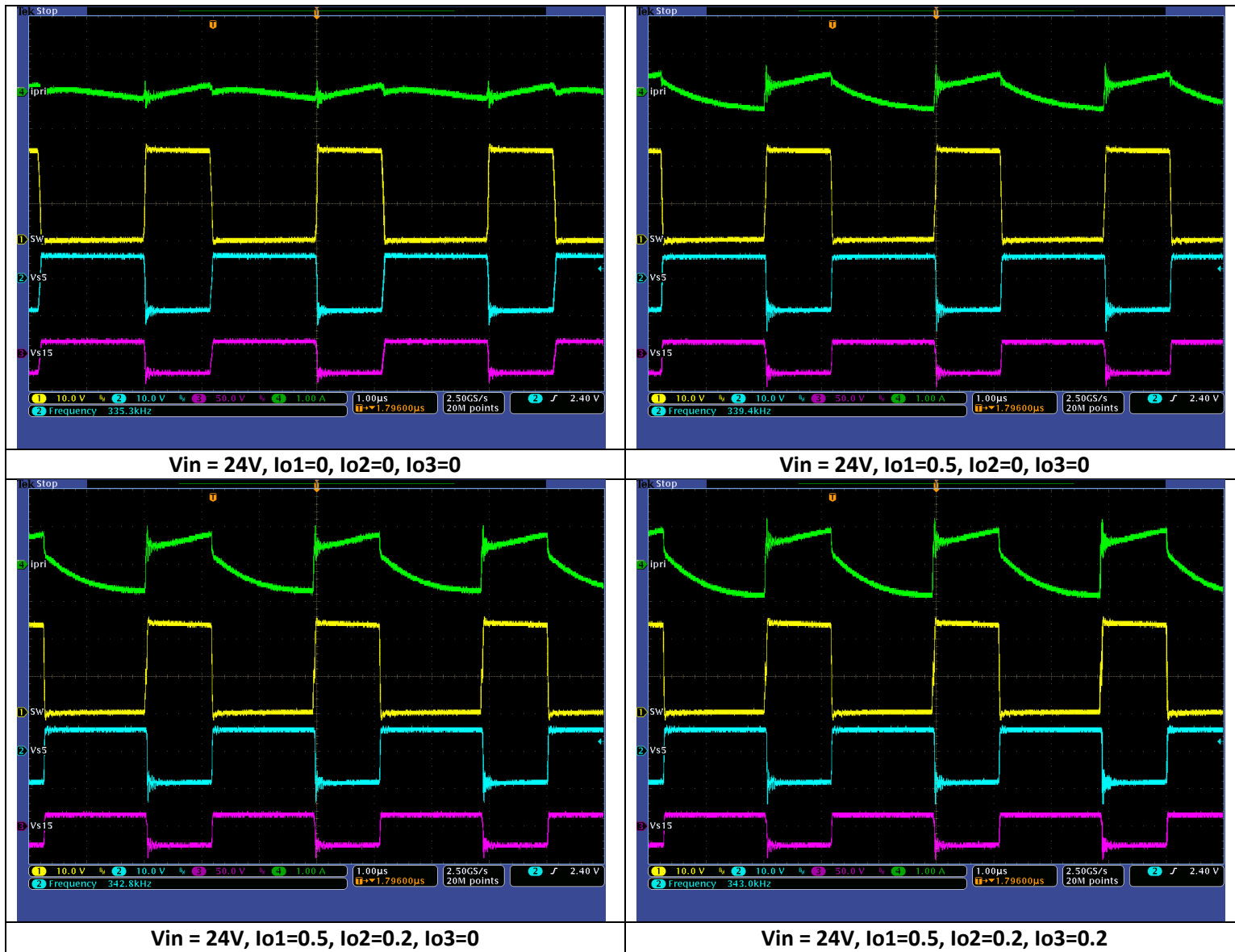
Vin = 24V, Io1=0, Io2= 0.2A, Io3=0



Vin = 24V, Io1=0.5A., Io2= 0.2A, Io3=0.2A



3.6) Primary Current, SW and secondary voltage of transformer



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