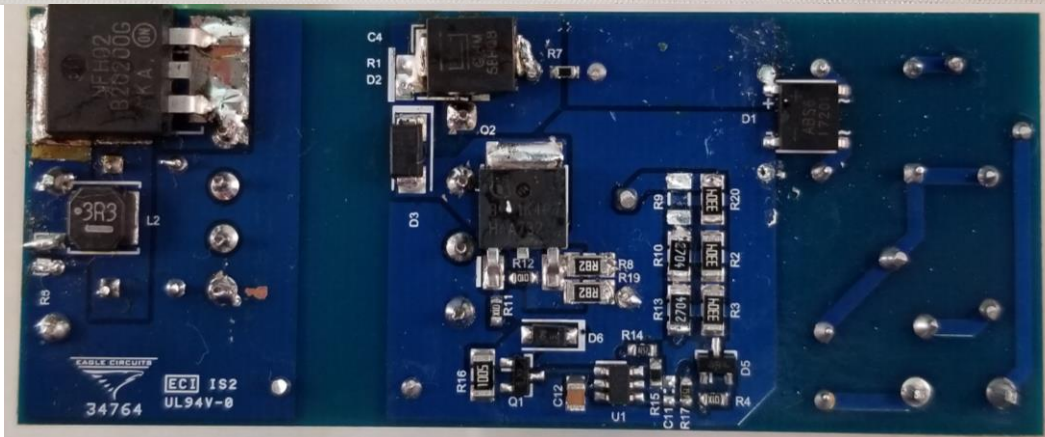
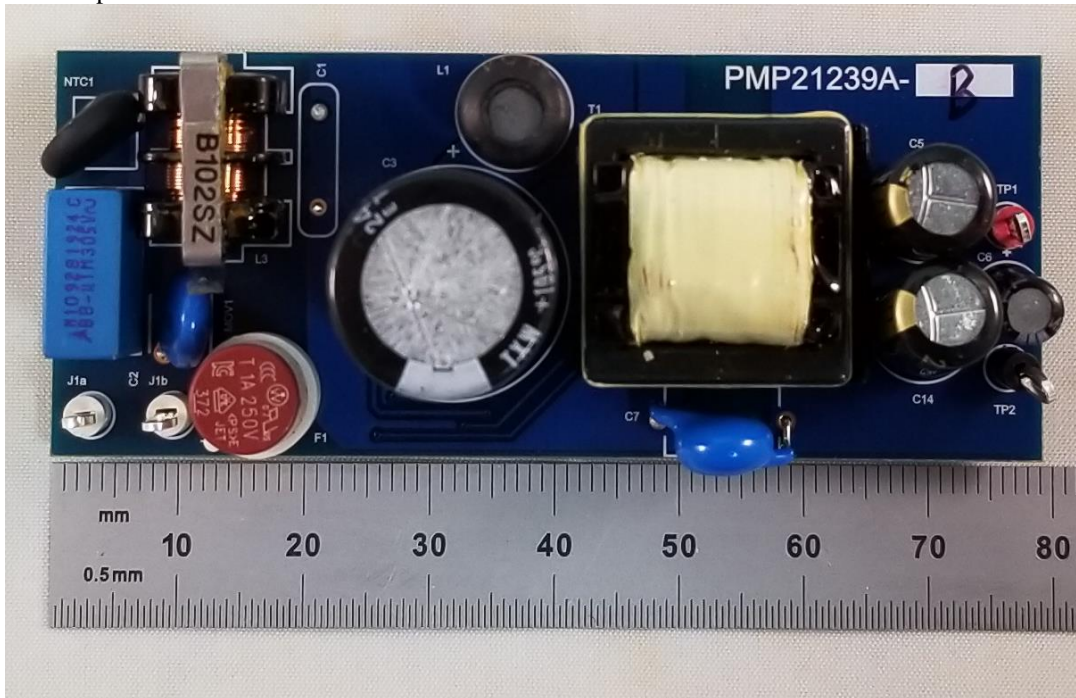




## 1 Board Photo

The image below shows PMP21239. This is a 90VAC-300VAC input PSR Flyback design that regulates a 12V/2A output.



## 2 System Standby Power

The following measurements were taken with no external load and no pre-load.

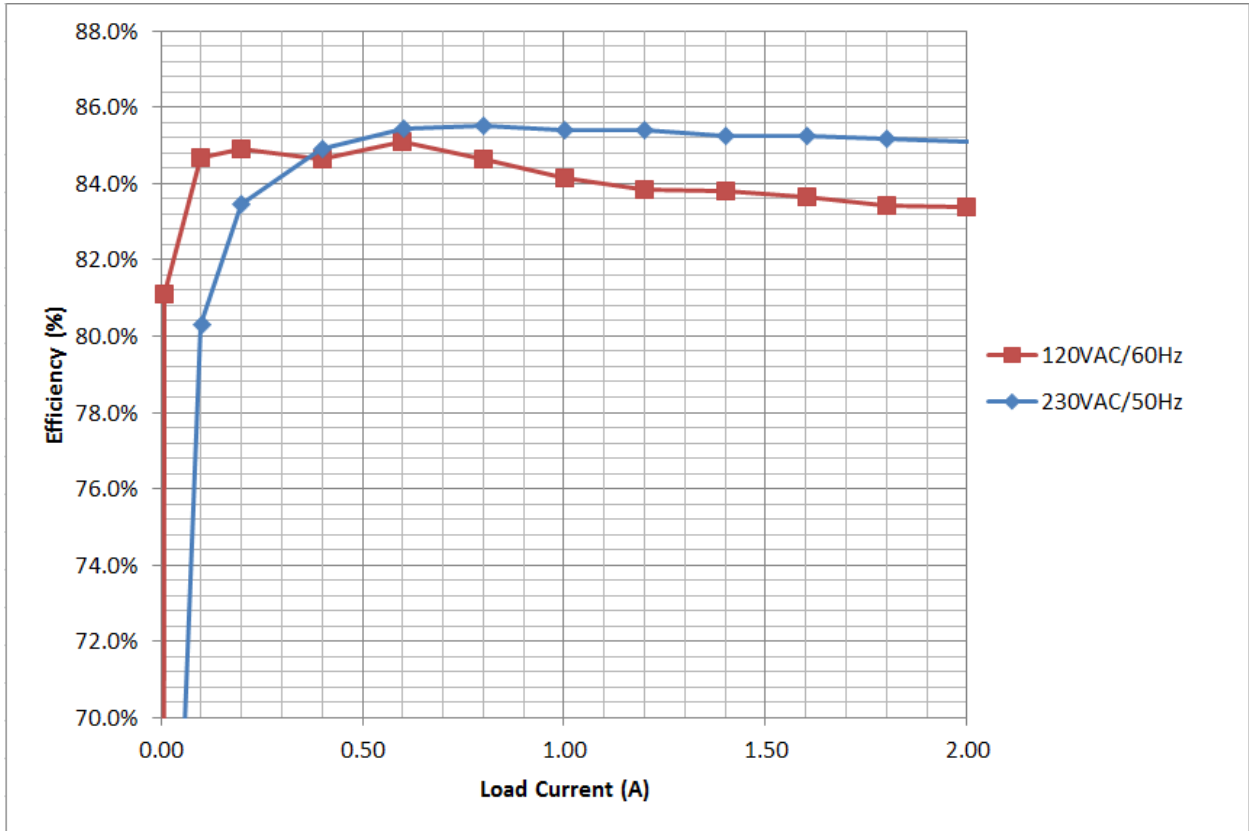
Vin	Standby Power
120VAC	4mW
230VAC	14mW



### 3 Efficiency

The following efficiency data was taken from J1a and J1b for input to TP1 and TP2 for output.

#### 3.1 Plot



#### 230VAC/50Hz

Iout	Vout	Vin	Iin	PF	Pin	Pout	Efficiency
0.000	14.44	230.2	0.010	0.006	0.014	0.000	0.0%
0.008	12.46	230.2	0.011	0.070	0.177	0.100	56.4%
0.100	12.44	230.2	0.025	0.265	1.549	1.244	80.3%
0.200	12.49	230.2	0.041	0.314	2.993	2.498	83.5%
0.399	12.56	230.2	0.072	0.354	5.902	5.011	84.9%
0.601	12.63	230.2	0.103	0.376	8.886	7.591	85.4%
0.801	12.70	230.2	0.132	0.392	11.896	10.173	85.5%
1.001	12.76	230.2	0.160	0.406	14.954	12.773	85.4%
1.200	12.83	230.2	0.188	0.417	18.029	15.396	85.4%
1.400	12.88	230.2	0.215	0.427	21.15	18.032	85.3%
1.601	12.94	230.2	0.242	0.437	24.3	20.717	85.3%
1.800	12.99	230.2	0.268	0.446	27.45	23.382	85.2%
2.001	13.05	230.2	0.292	0.458	30.68	26.113	85.1%

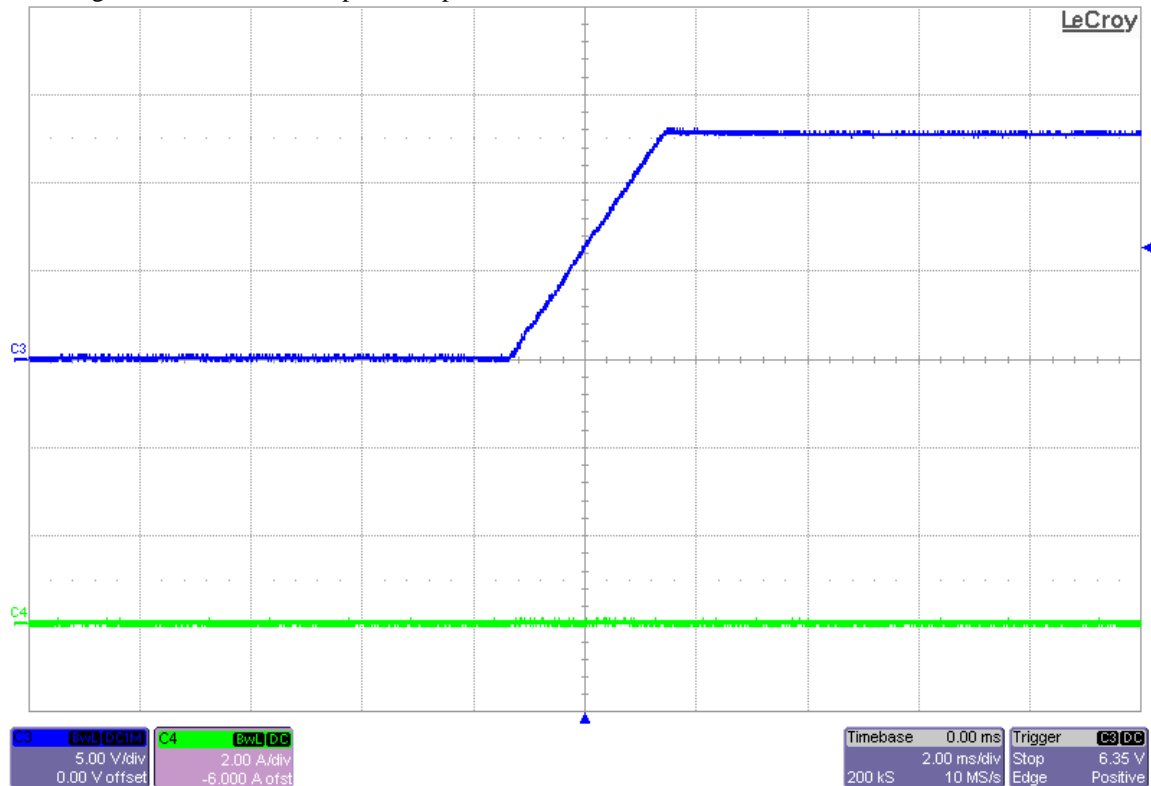


## 120VAC/60Hz

Iout	Vout	Vin	Iin	PF	Pin	Pout	Efficiency
0.000	14.42	120.2	0.009	0.004	0.004	0.000	0.0%
0.008	12.46	120.2	0.010	0.102	0.123	0.100	81.1%
0.099	12.43	120.2	0.035	0.347	1.453	1.231	84.7%
0.199	12.49	120.2	0.062	0.390	2.927	2.486	84.9%
0.399	12.56	120.1	0.113	0.436	5.921	5.011	84.6%
0.600	12.63	120.1	0.161	0.460	8.905	7.578	85.1%
0.801	12.70	120.1	0.209	0.481	12.02	10.173	84.6%
1.001	12.76	120.1	0.254	0.498	15.18	12.773	84.1%
1.199	12.82	120.1	0.298	0.511	18.33	15.371	83.9%
1.400	12.88	120.1	0.342	0.524	21.52	18.032	83.8%
1.601	12.93	120.1	0.384	0.537	24.75	20.701	83.6%
1.801	12.99	120.1	0.426	0.548	28.04	23.395	83.4%
2.000	13.06	120.1	0.464	0.566	31.32	26.120	83.4%

## 4 Startup

The image below shows the output startup at no load.

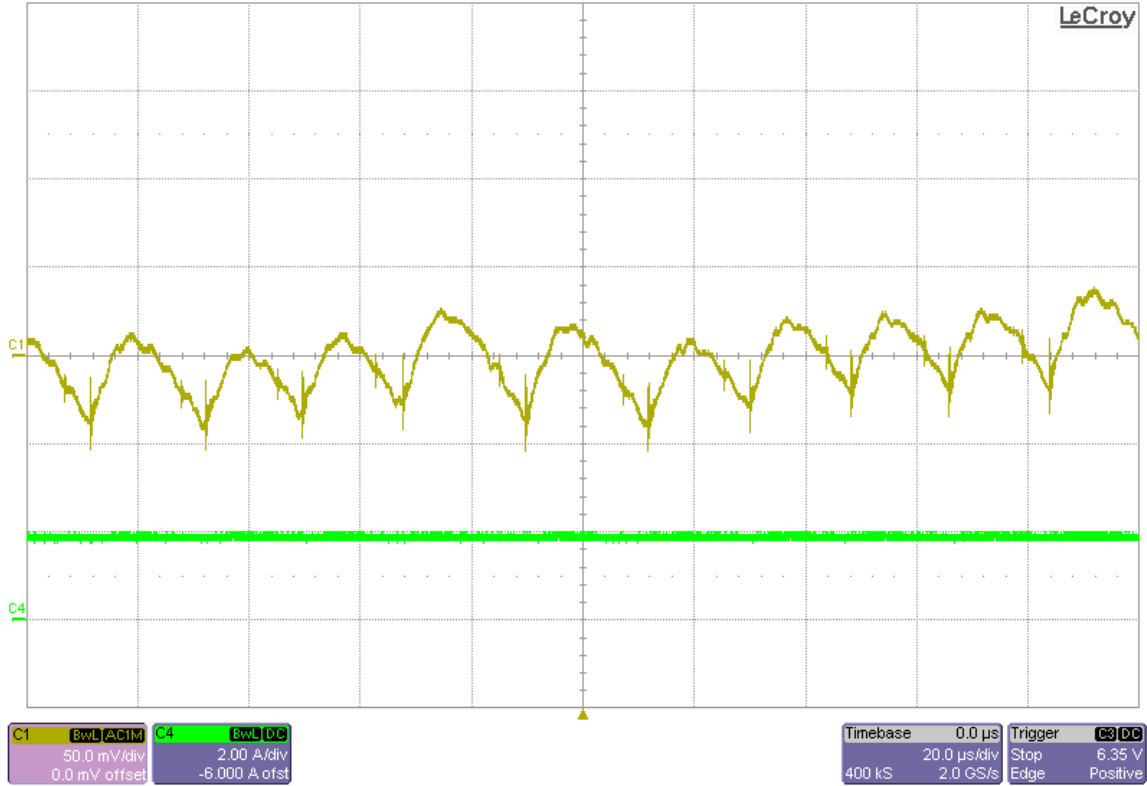




## 5 Output Ripple Voltage

The following image shows the 12V output ripple at full load (2A).

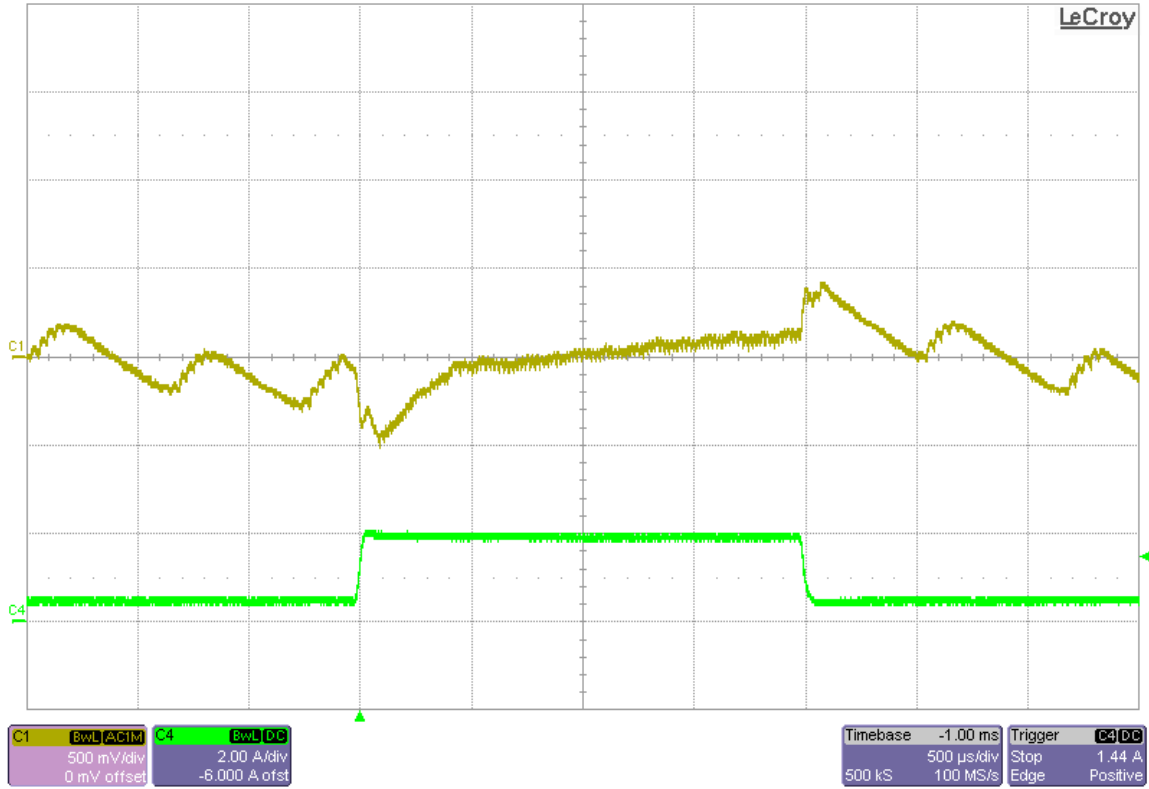
### 5.1 Output Ripple, 2A Load





## 6 Load Transients

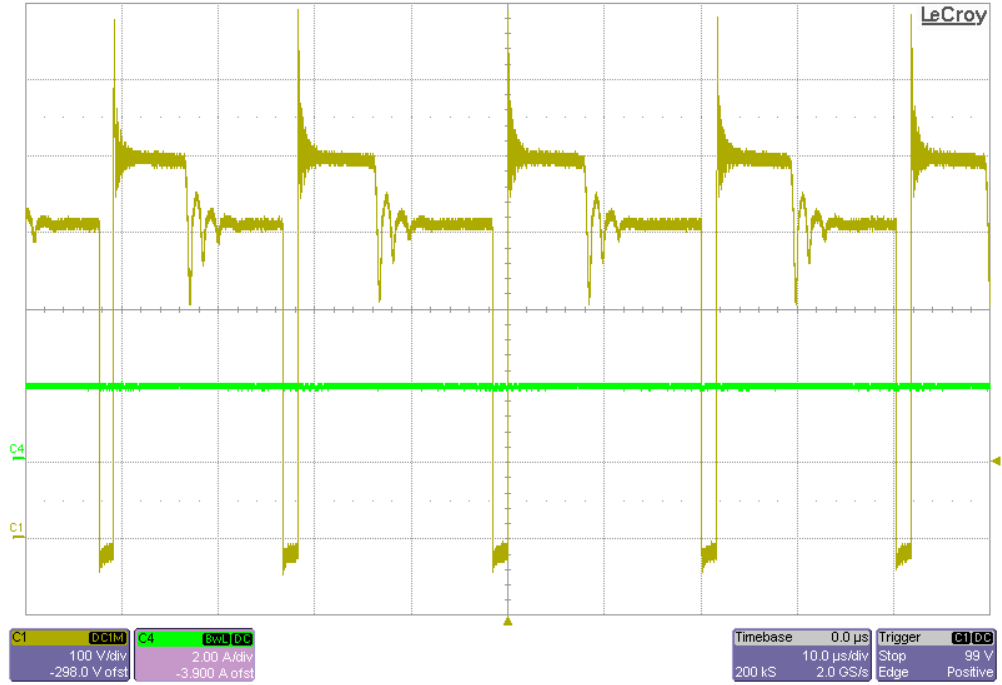
### 6.1 12Vout, 0.5A to 2A Load Step



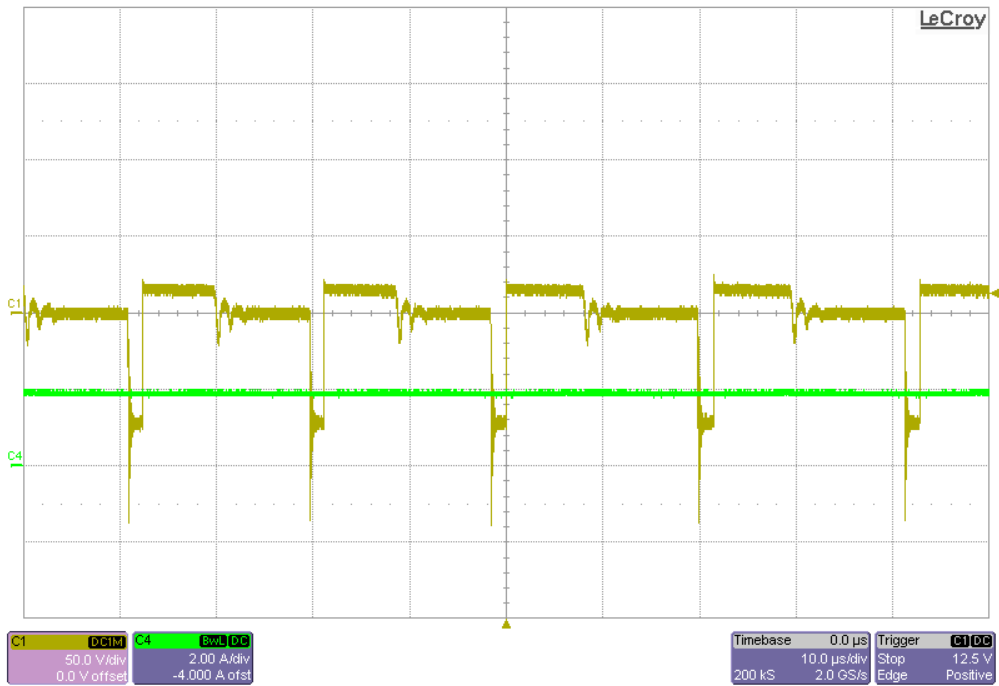


## 7 Switch Node Waveforms

### 7.1 Primary FET Drain Voltage, $V_{in} = 300VAC, 2A$ Load



### 7.2 Secondary Rectifier Drain Voltage, $V_{in} = 300VAC, 2A$ Load

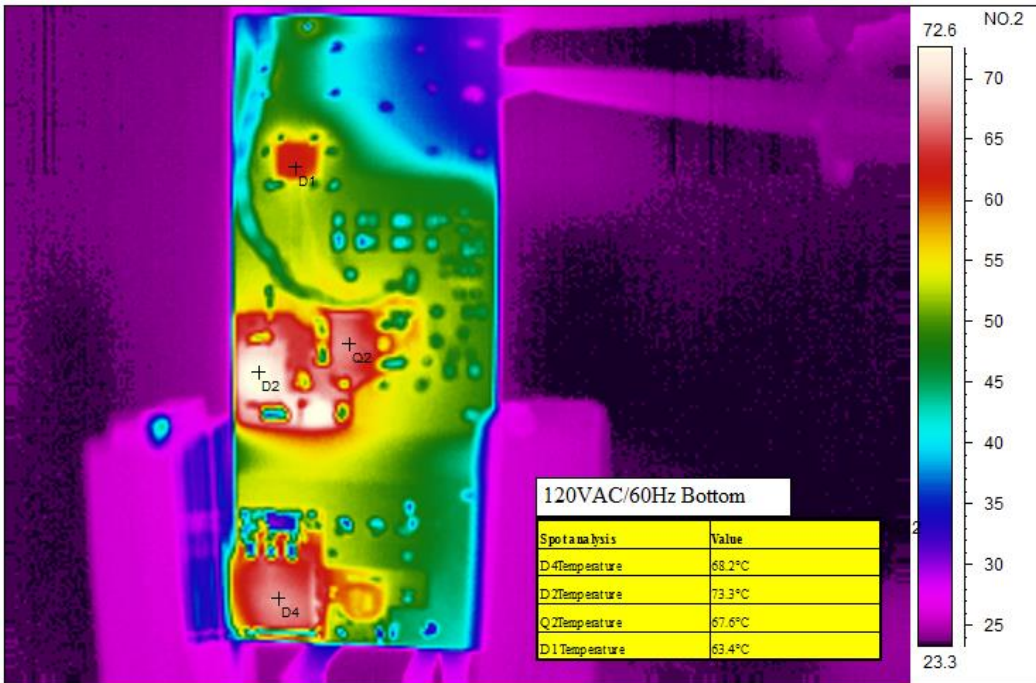
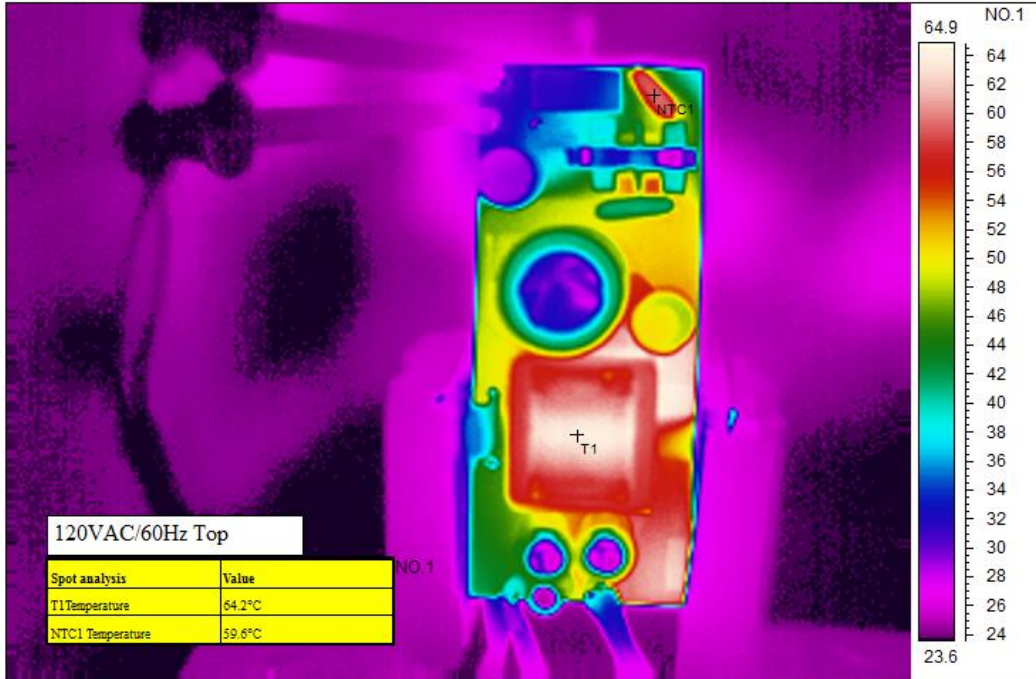




## 8 Thermal Images

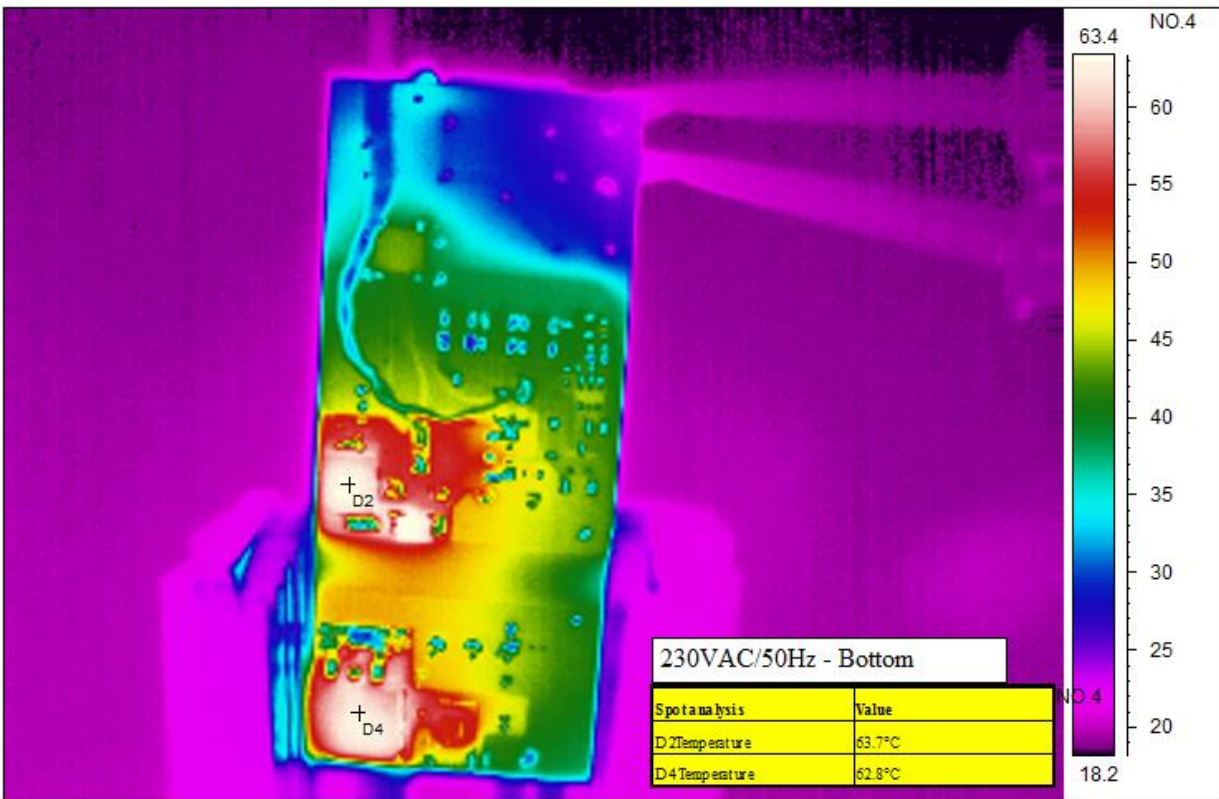
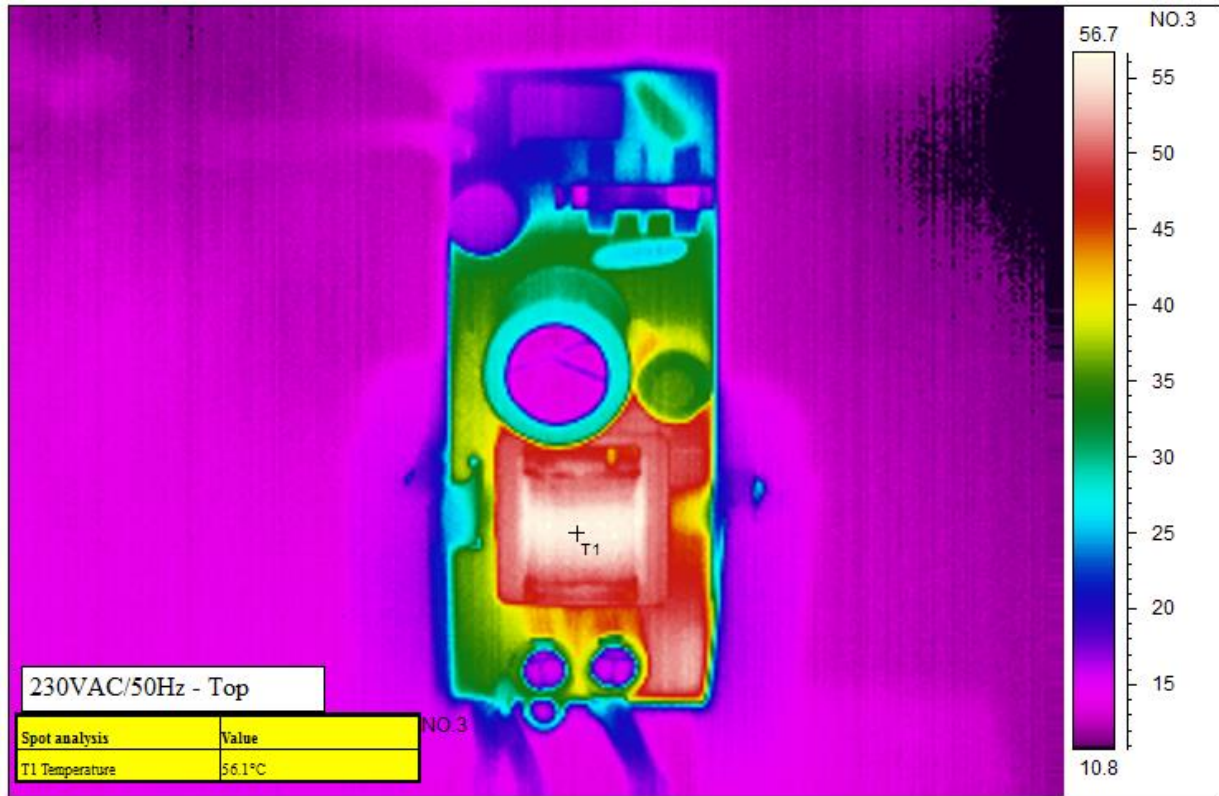
These thermal images were taken after a 20 minute soak when fully loaded to 2A. The ambient temperature is 25C. There is no airflow.

### 8.1 120VAC/60Hz





## 8.2 230VAC/50Hz







### 9 Conducted Emissions Quasi Peak Test

