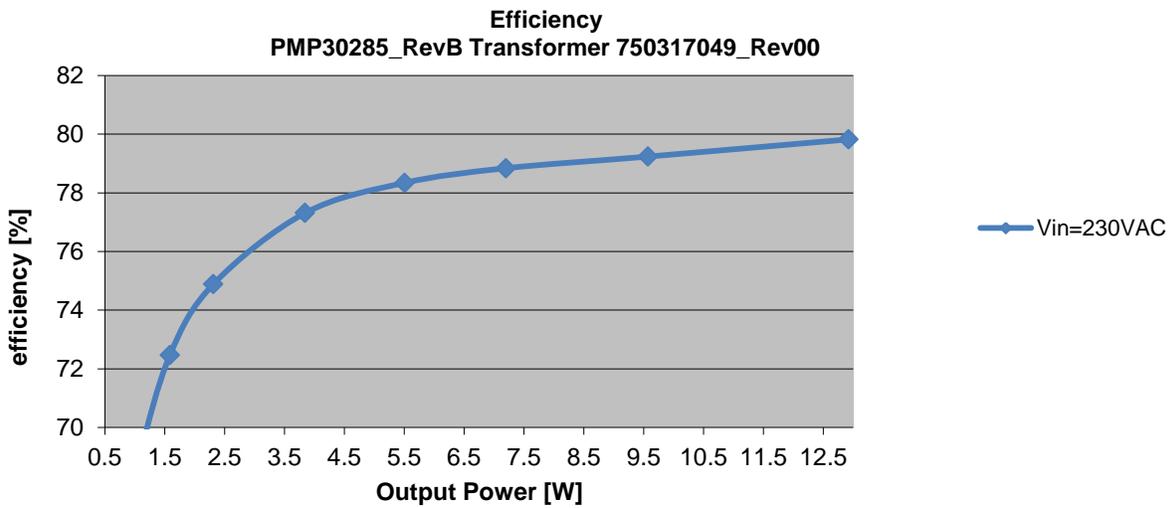
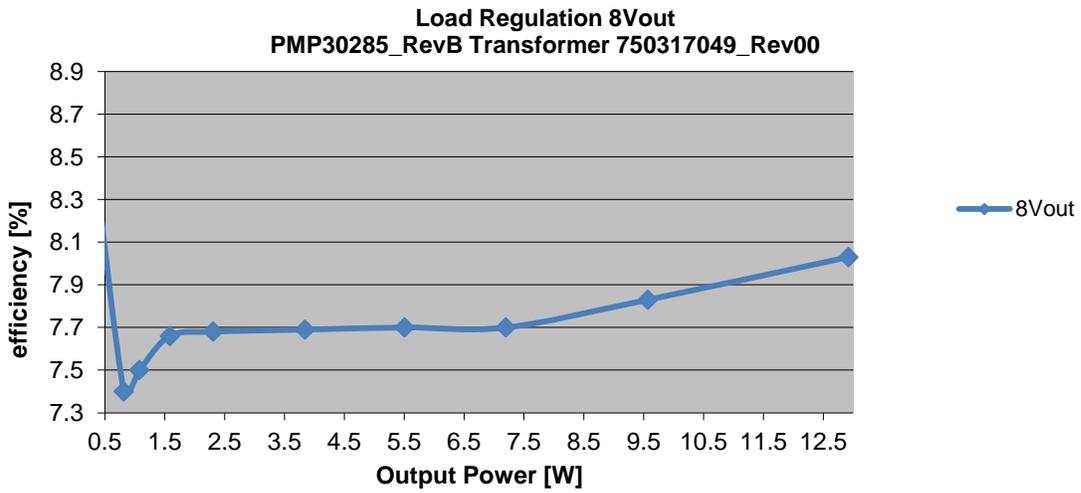
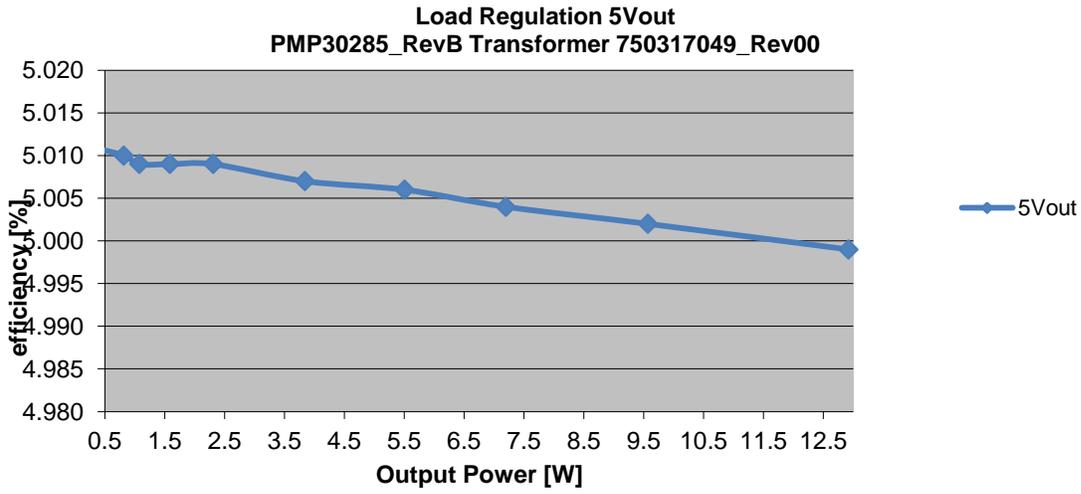


## 1 Efficiency and Load regulation

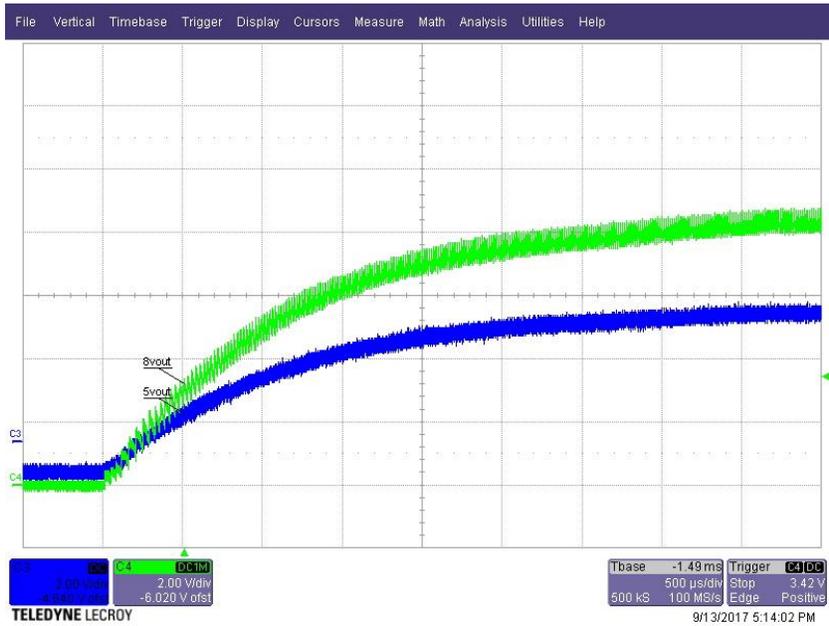




## 2 Startup

Input voltage = 120VAC

Output Power = 12.4W



Input voltage = 230VAC

Output Power = 12.4W



# PMP30285\_RevB Test Results

Transformer 750317049\_Rev00



Input voltage = 230VAC

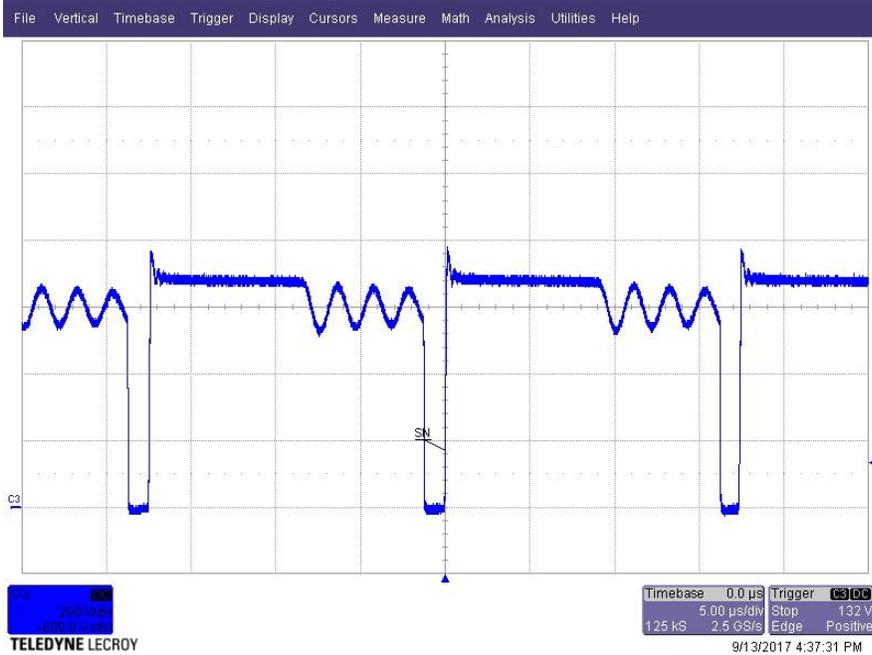
Output Power = 0W



## 3 Switch Node

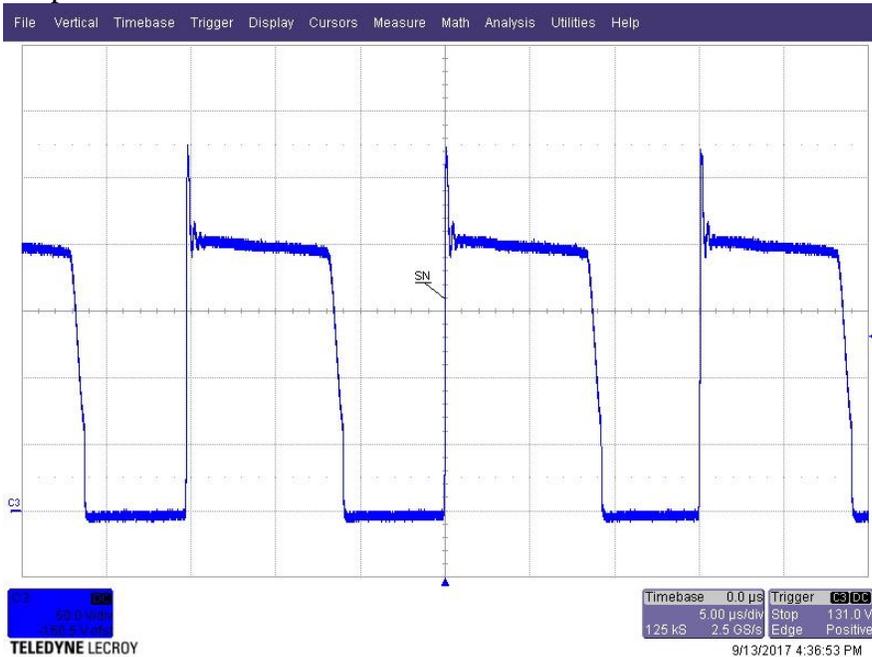
Input voltage = 618VDC

Output Power = 12.4W



Input voltage = 120VDC

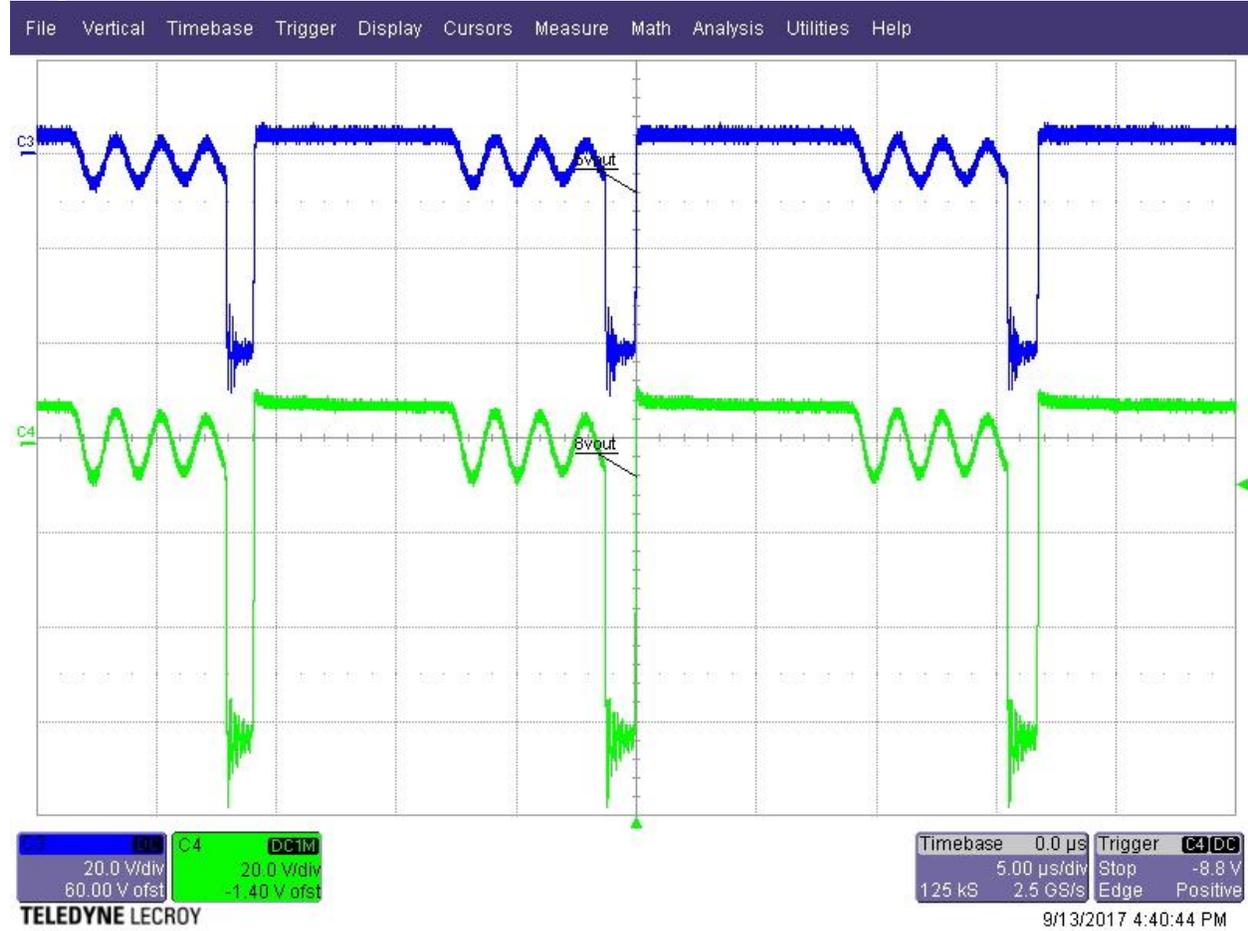
Output Power = 12.4W



## 4 Secondary Switch Node

Input voltage = 618VDC

Output Power = 12.4W

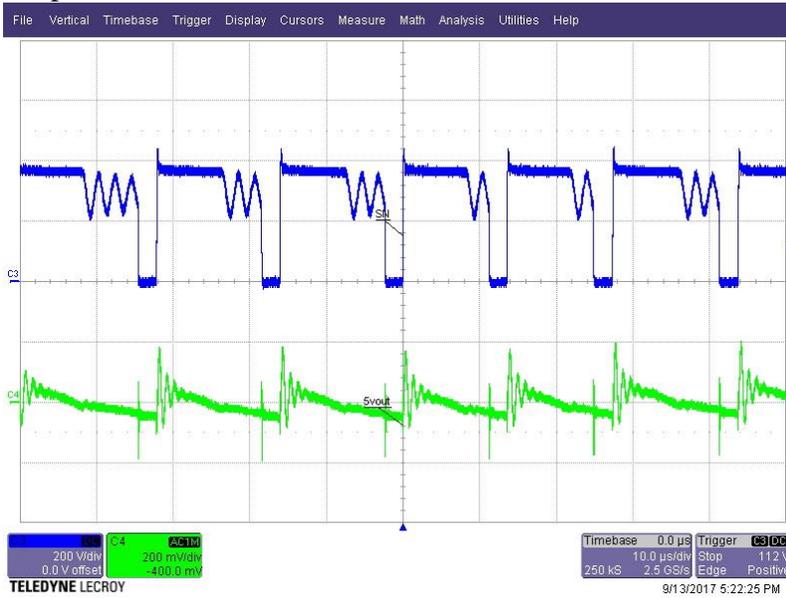


## 5 Output Ripple

### 5.1 5V Output

Input voltage = 230VAC

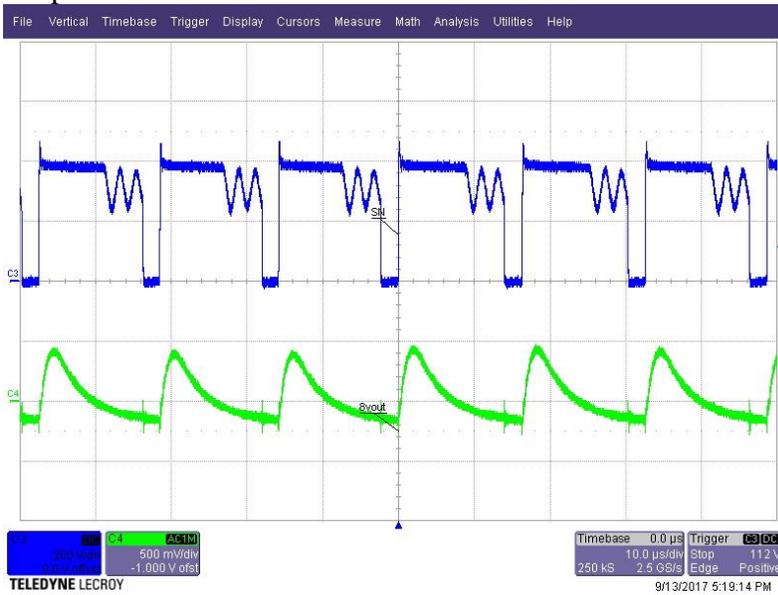
Output Power = 12.4W



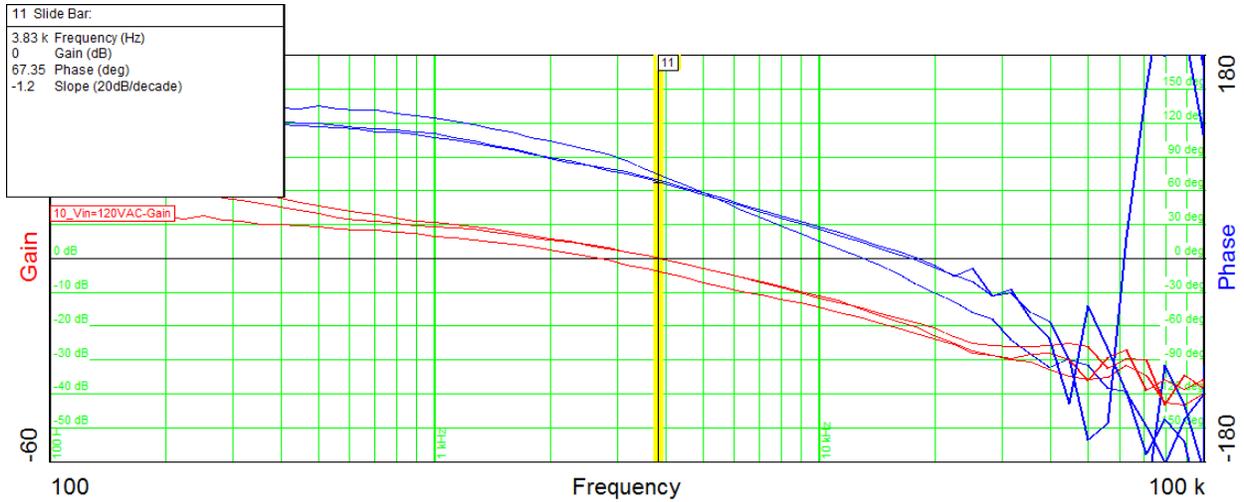
### 5.2 8V Output

Input voltage = 230VAC

Output Power = 12.4W



## 6 Control Loop Frequency Response



Input Voltage = 120VAC  
Output Power = 12.4W  
Phase margin = 94°  
Bandwidth = 2.7kHz

Input Voltage = 230VAC  
Output Power = 12.4W  
Phase margin = 67°  
Bandwidth = 3.8kHz

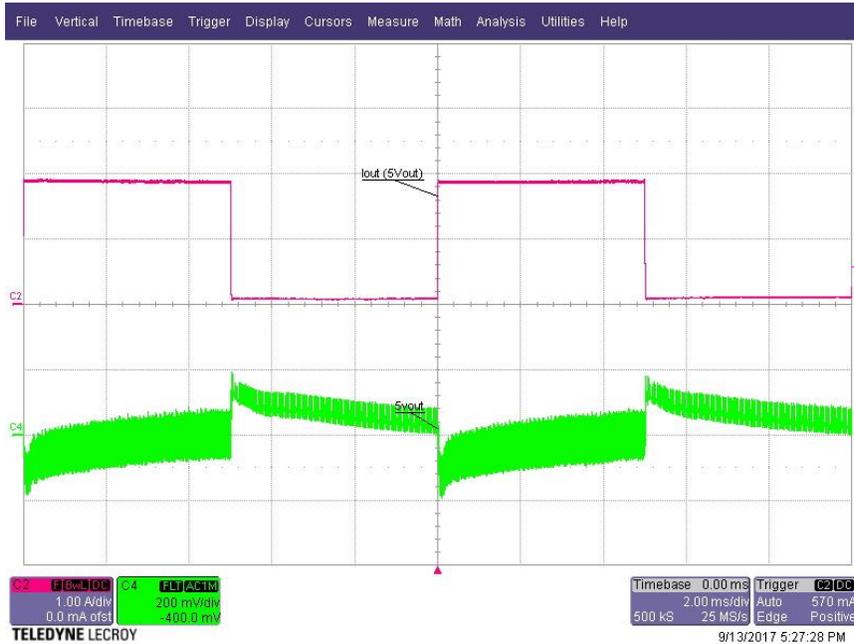
Input Voltage = 273VAC  
Output Power = 12.4W  
Phase margin = 69°  
Bandwidth = 3.8kHz

## 7 Load step

### 7.1 5V Output

Input voltage = 230VAC

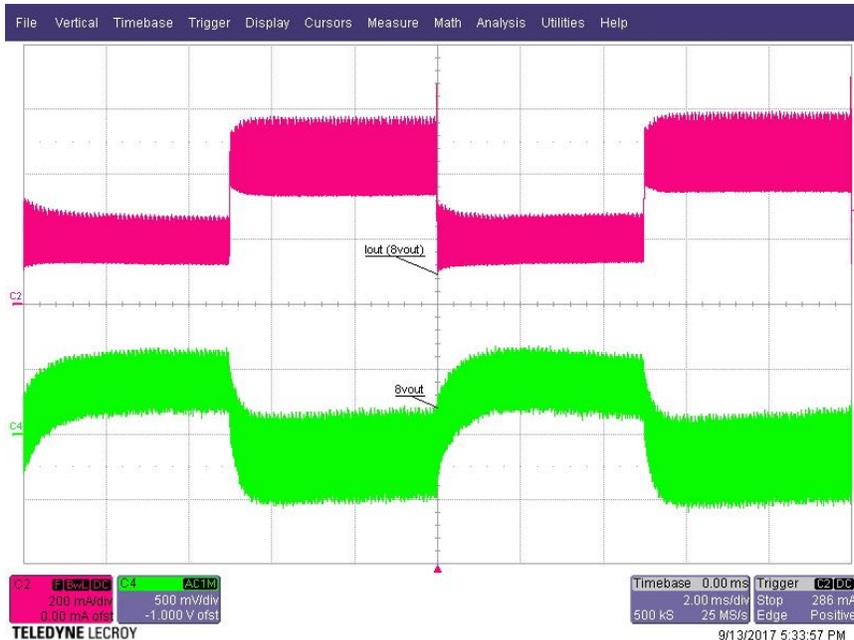
5Vout Load current = 0.1A to 2.0A



### 7.2 8V Output (unregulated)

Input voltage = 230VAC

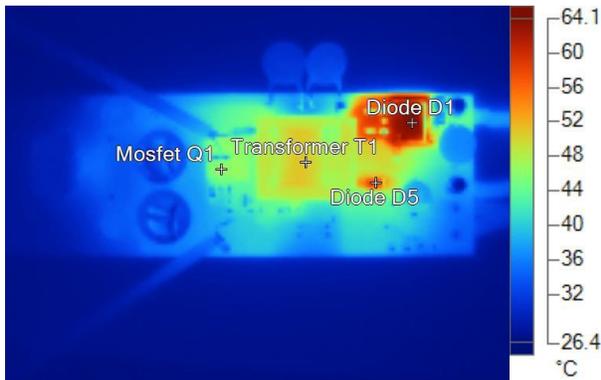
8Vout Load current = 0.15A to 0.3A



## 8 Thermal Analysis

The images below show the infrared images taken from the FlexCam after 15min at full load output power.

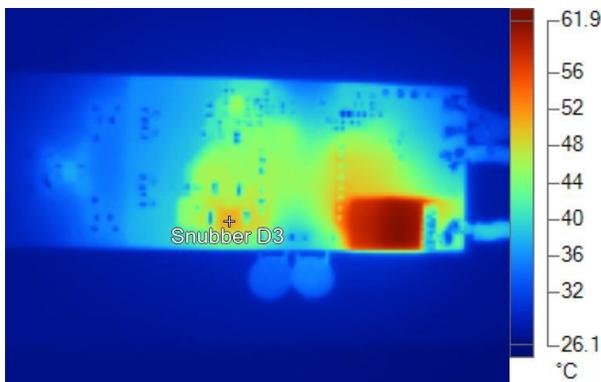
Input voltage = 230VAC  
 Output Power = 12.4W  
 Ambient temperature = 25°C  
 No heatsink, no airflow



IR20170913\_1102 Rev00 Vin=230VAC Top.is2

Name	Temperature
Transformer T1	51.1°C
Diode D1	64.1°C
Mosfet Q1	46.5°C
Diode D5	58.1°C

Input voltage = 230VAC  
 Output Power = 12.4W  
 Ambient temperature = 25°C  
 No heatsink, no airflow

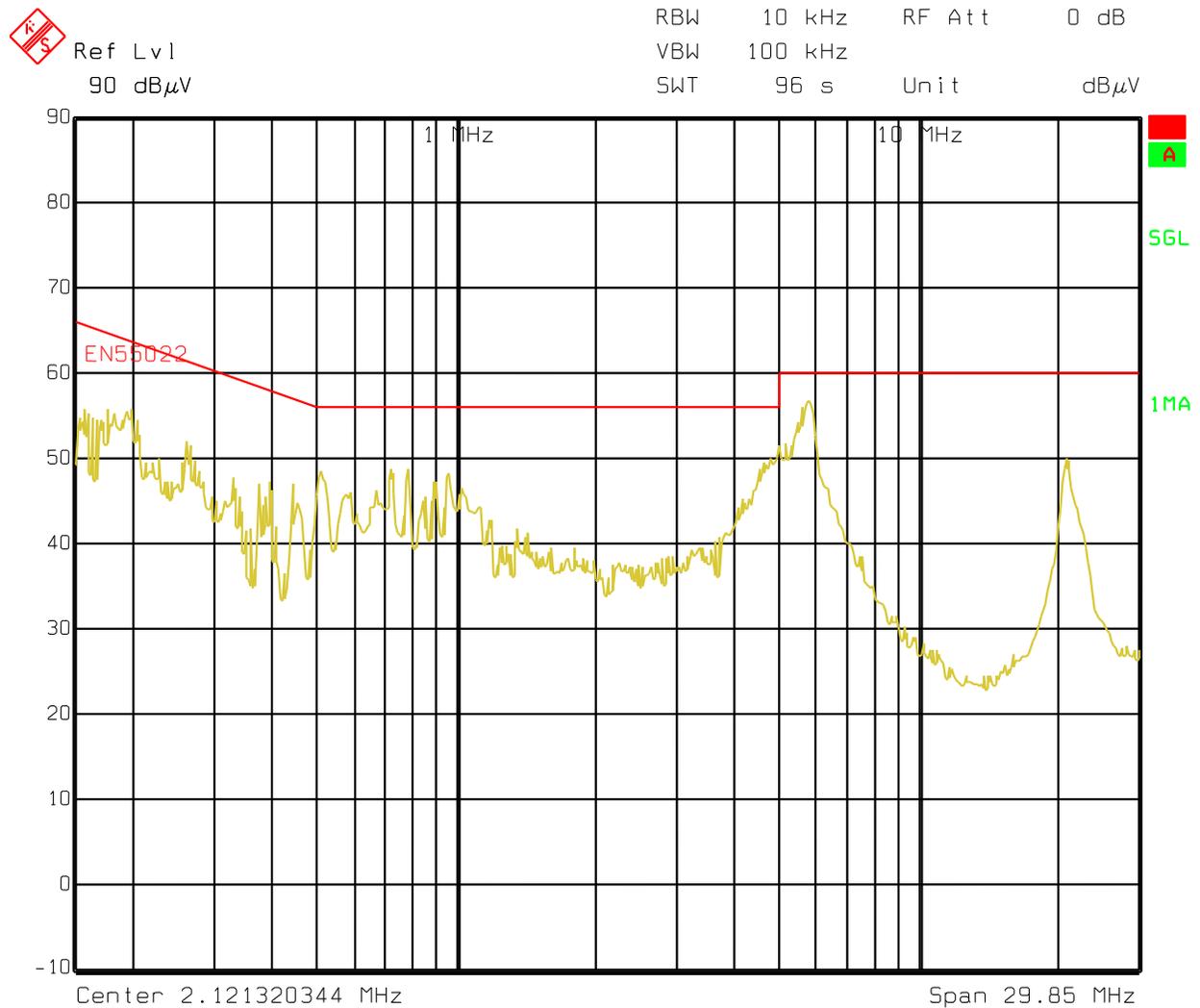


IR20170913\_1103 Rev00 Vin=230VAC Bottom.is2

Name	Temperature
Snubber D3	50.6°C

## 9 EMI Measurement

The graph below shows the conducted emission EMI noise and the EN55022 Class-B Quasi-Peak limits (measurement from the worst case line). The measurement is not certified. The board was connected to a LISN and an isolation transformer; the load was a power resistor. The receiver was set to Quasi-peak detector, 10 KHz bandwidth. The negative terminal GND1 of the converter has been connected to the input LINE (see schematic: R3=not populated, R101=0ohm)! The negative terminal GND2 has been connected to the ground of the LISN.



Date: 1.JAN.1997 5:20:09

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