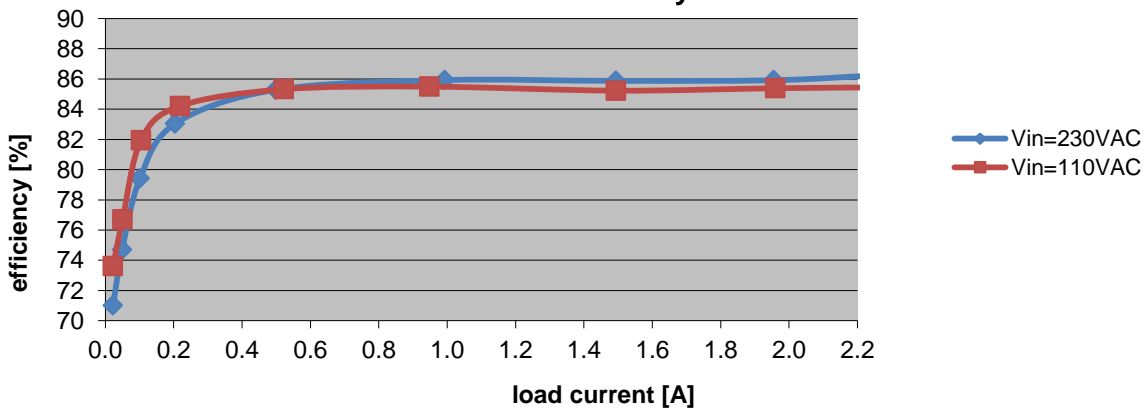
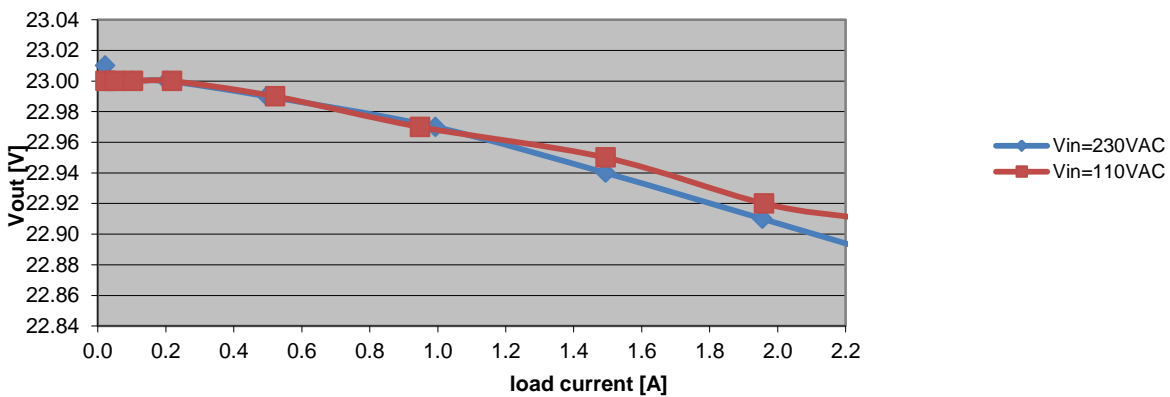


1 Efficiency and Load regulation

**PMP30251
efficiency**



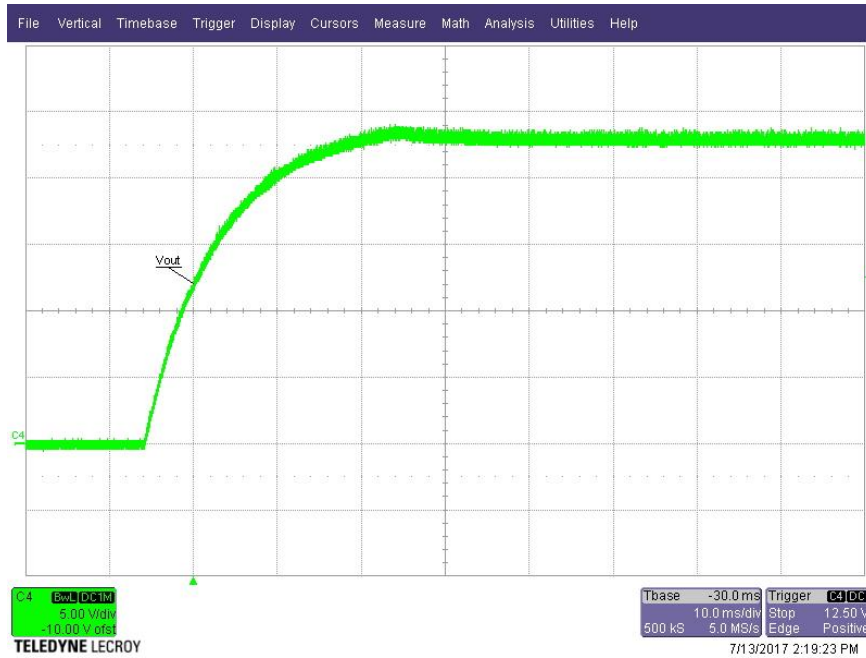
**PMP30251
Load Regulation**



2 Startup

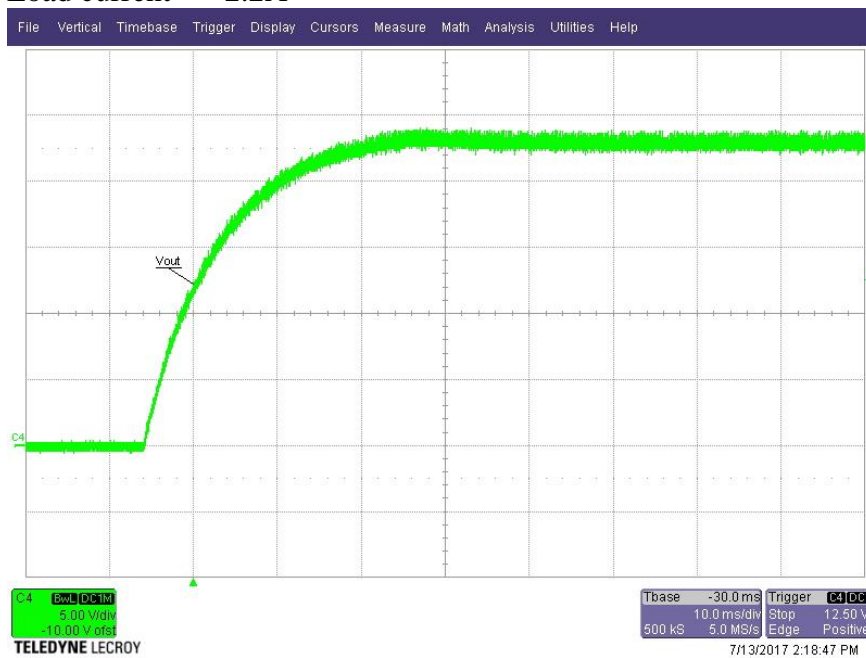
Input voltage = 85VAC

Load current = 2.2A



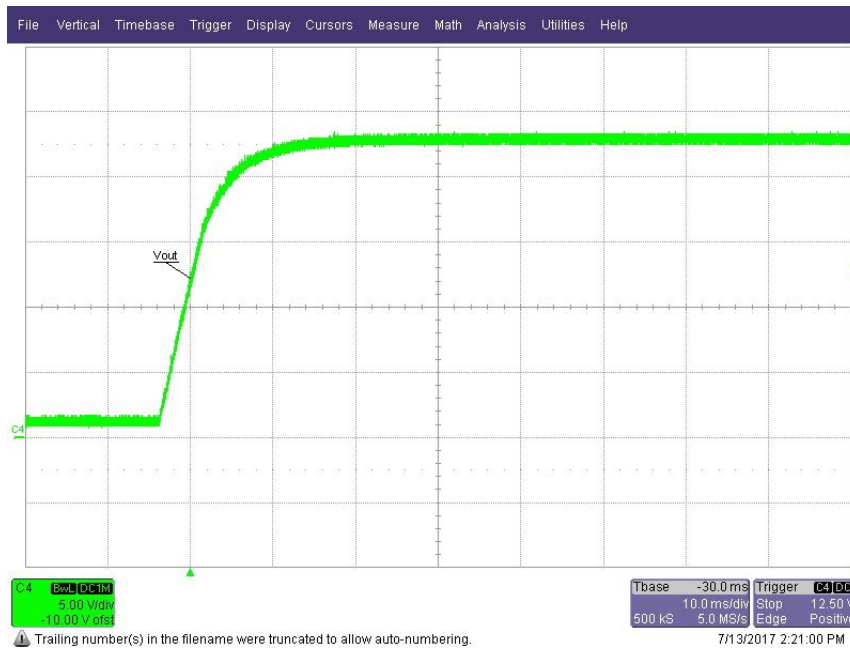
Input voltage = 264VAC

Load current = 2.2A



Input voltage = 264VAC

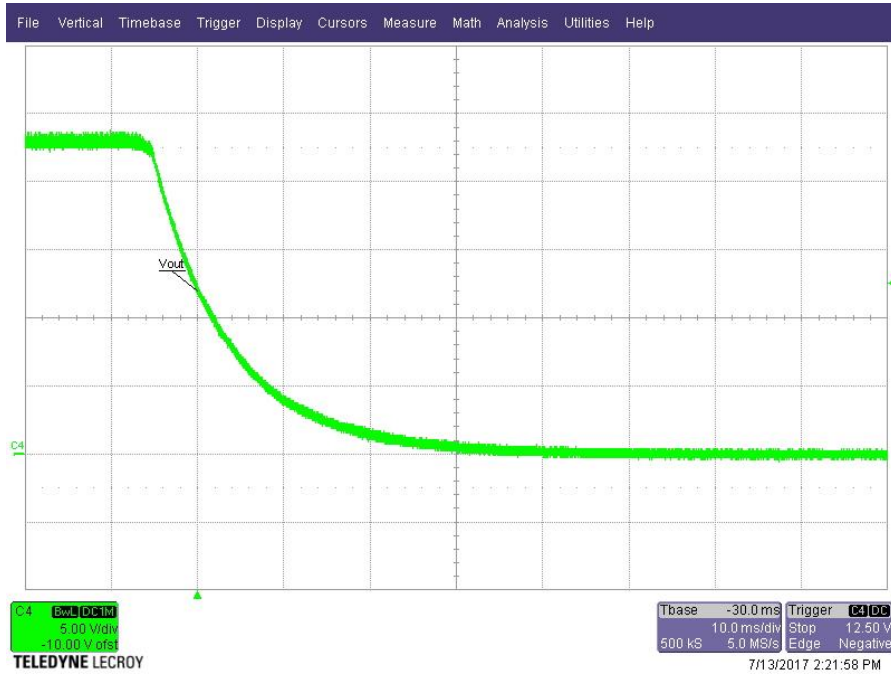
Load current = 0A



3 Shutdown

Input voltage = 230VAC

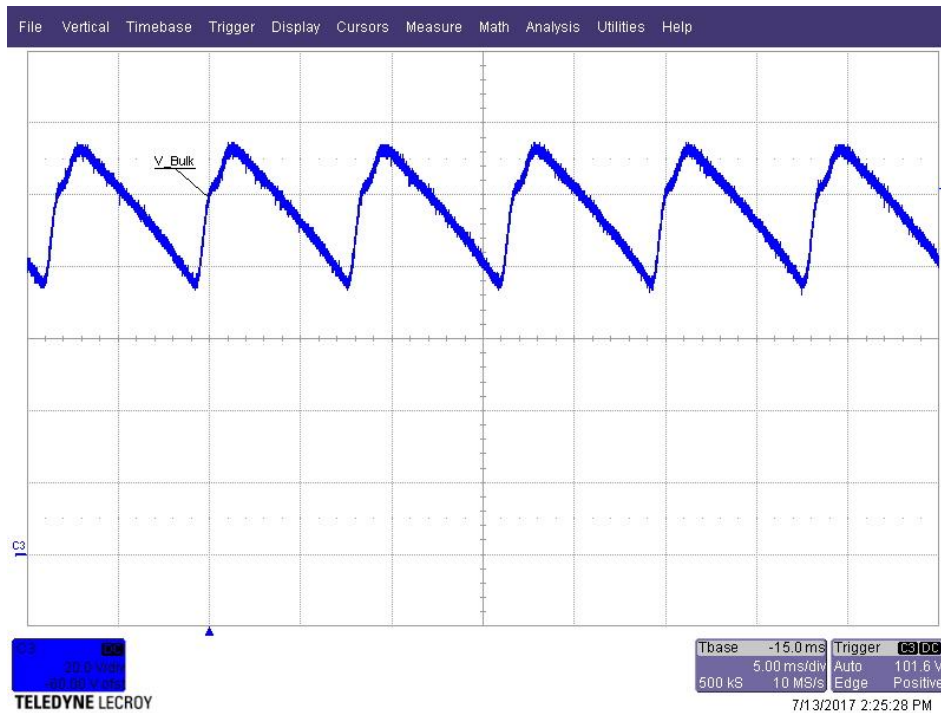
Load current = 2.2A



4 Input Ripple (Bulk Capacitor Voltage)

Input voltage = 85VAC

Load current = 2.2A



Input voltage = 230VAC

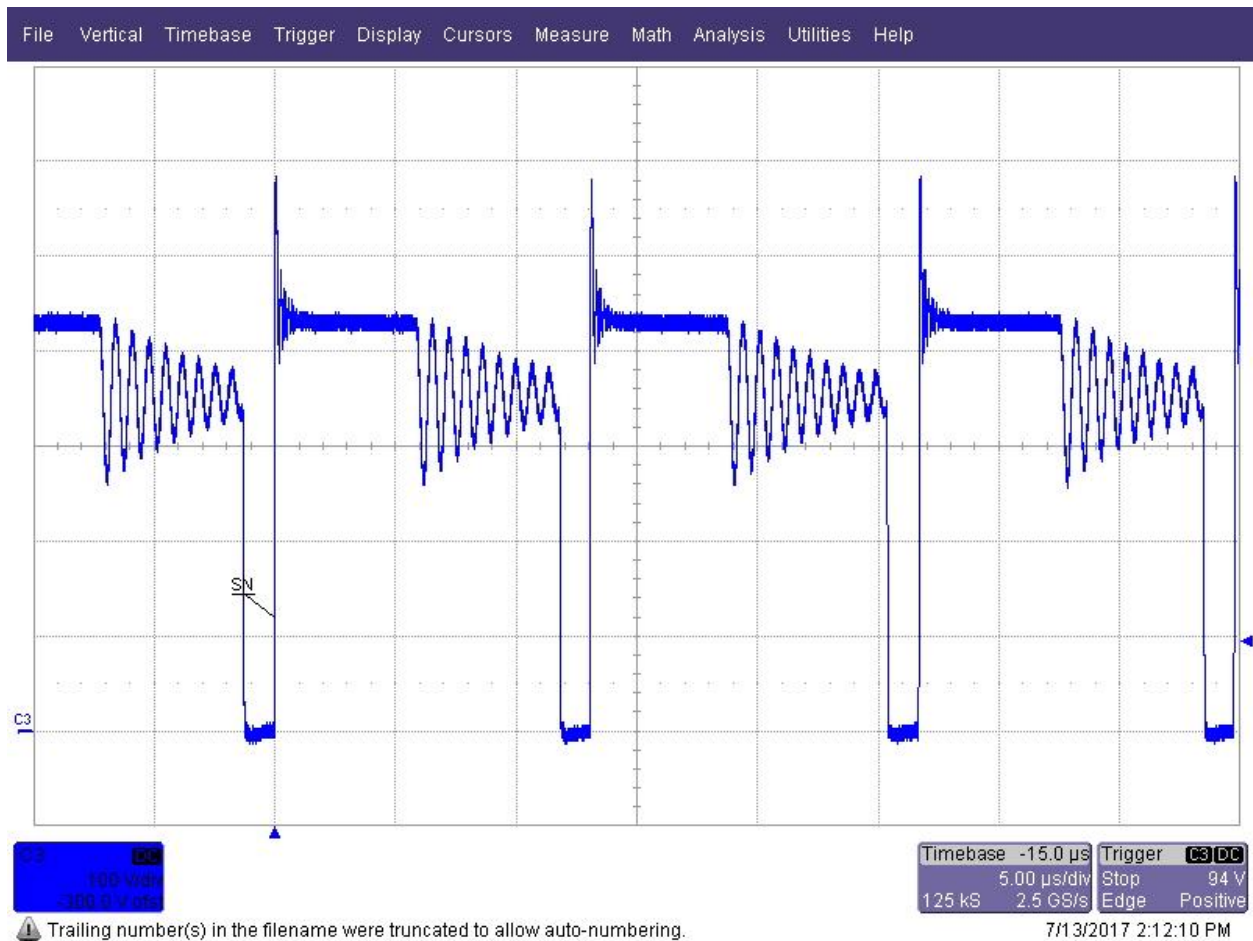
Load current = 2.2A



5 Switch Node

Input voltage = 264VAC

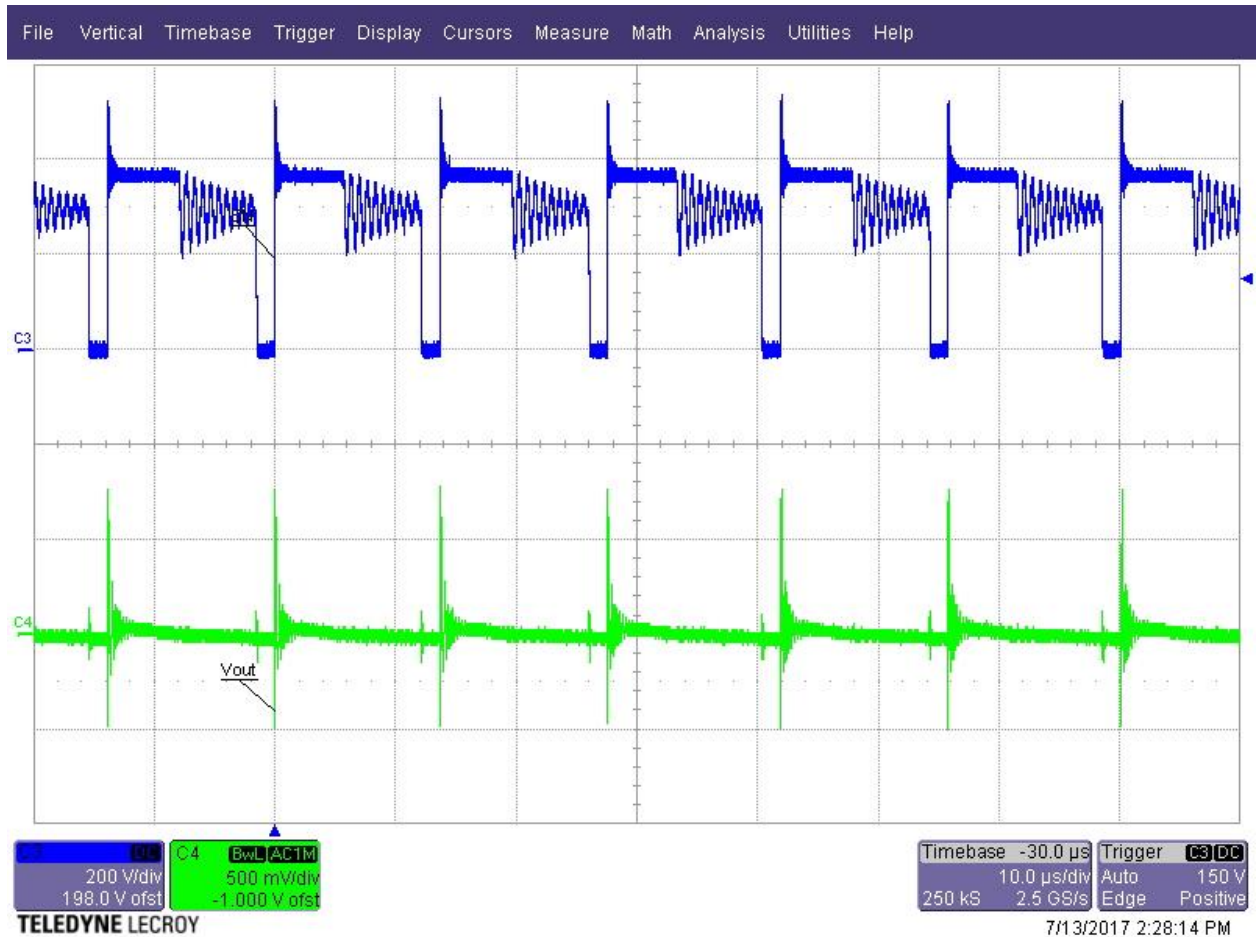
Load current = 2.2A



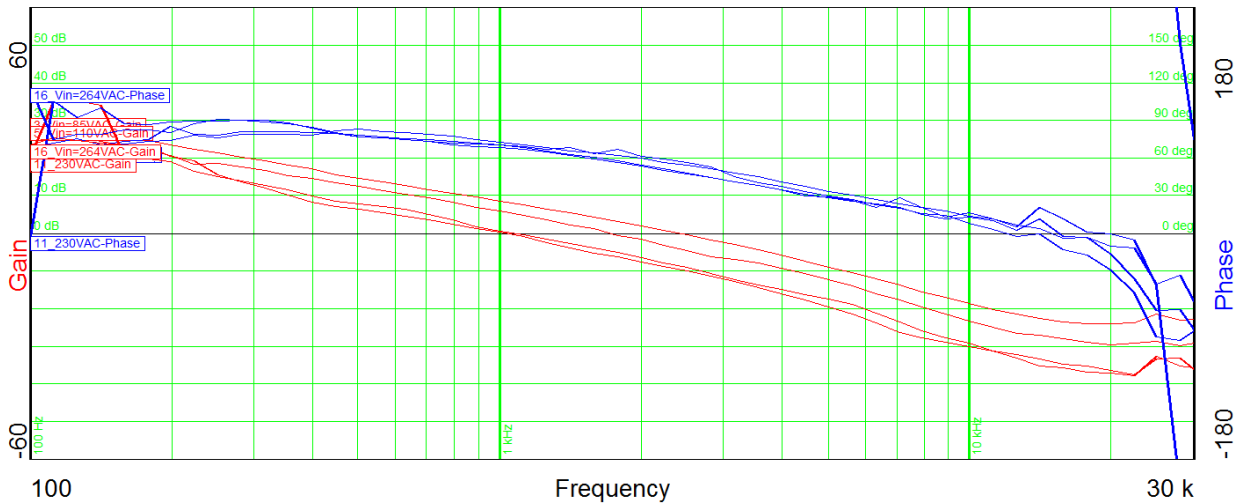
6 Output Ripple

Input voltage = 230VAC

Load current = 2.2A



7 Control Loop Frequency Response



Output Load = 2.2A
 Input voltage = 85VAC
 Phase margin = 55°
 Bandwidth = 2.4kHz

Output Load = 2.2A
 Input voltage = 110VAC
 Phase margin = 66°
 Bandwidth = 1.7kHz

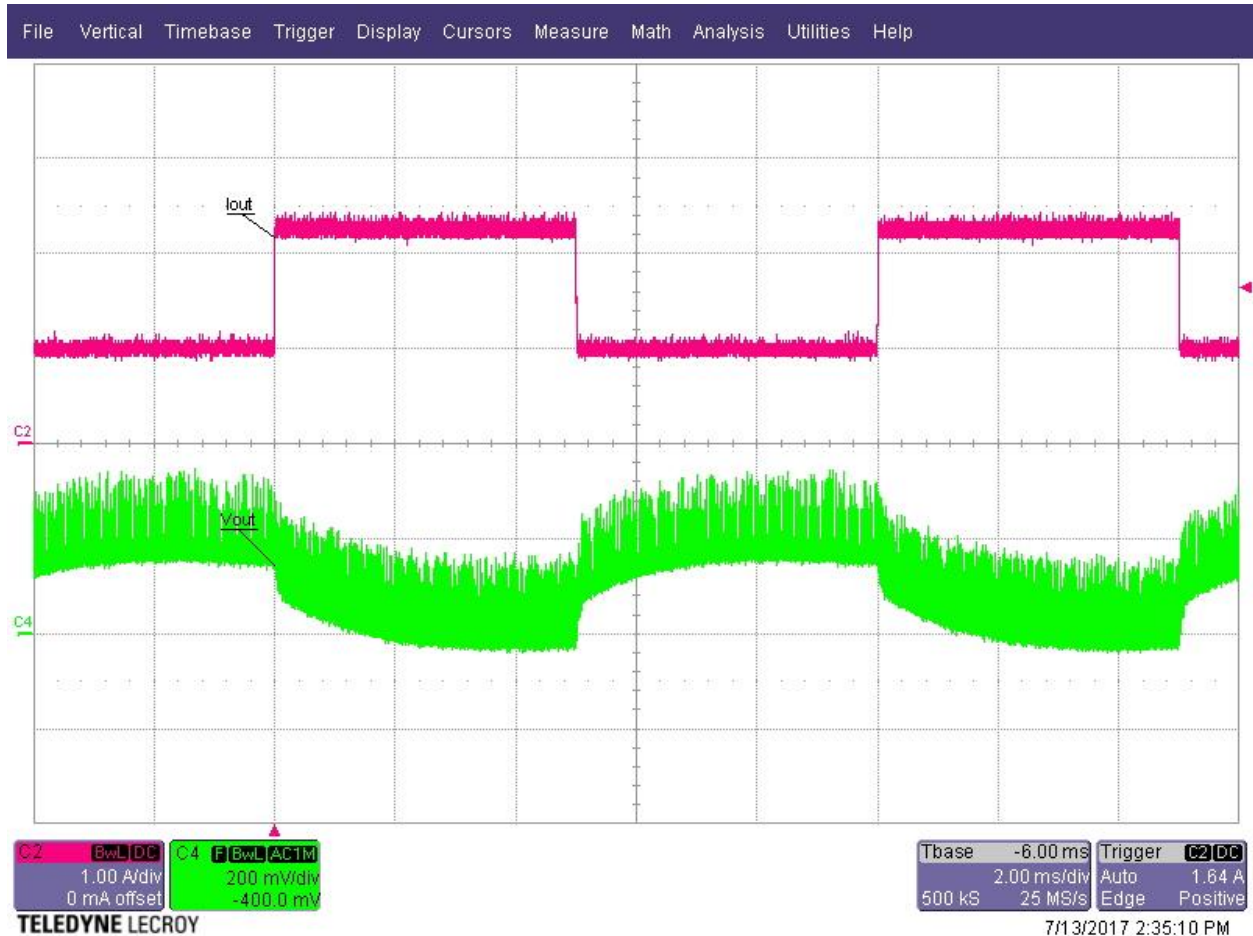
Output Load = 2.2A
 Input voltage = 230VAC
 Phase margin = 69°
 Bandwidth = 1.1kHz

Output Load = 2.2A
 Input voltage = 264VAC
 Phase margin = 68°
 Bandwidth = 1.0kHz

8 Load step

Input voltage = 230VAC

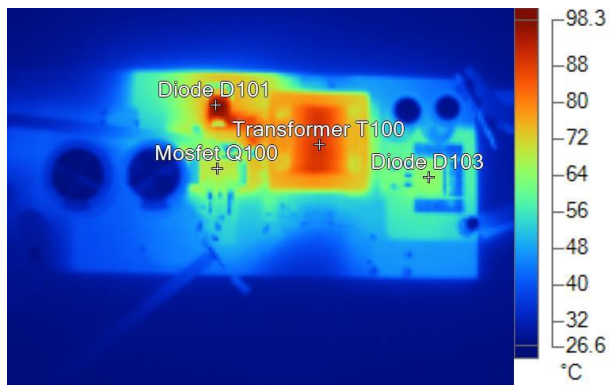
Load current = 1A - 2.2A



9 Thermal Analysis

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

Input voltage = 230VAC
Load current = 2.2A
Ambient temperature = 25°C
No heatsink, no airflow



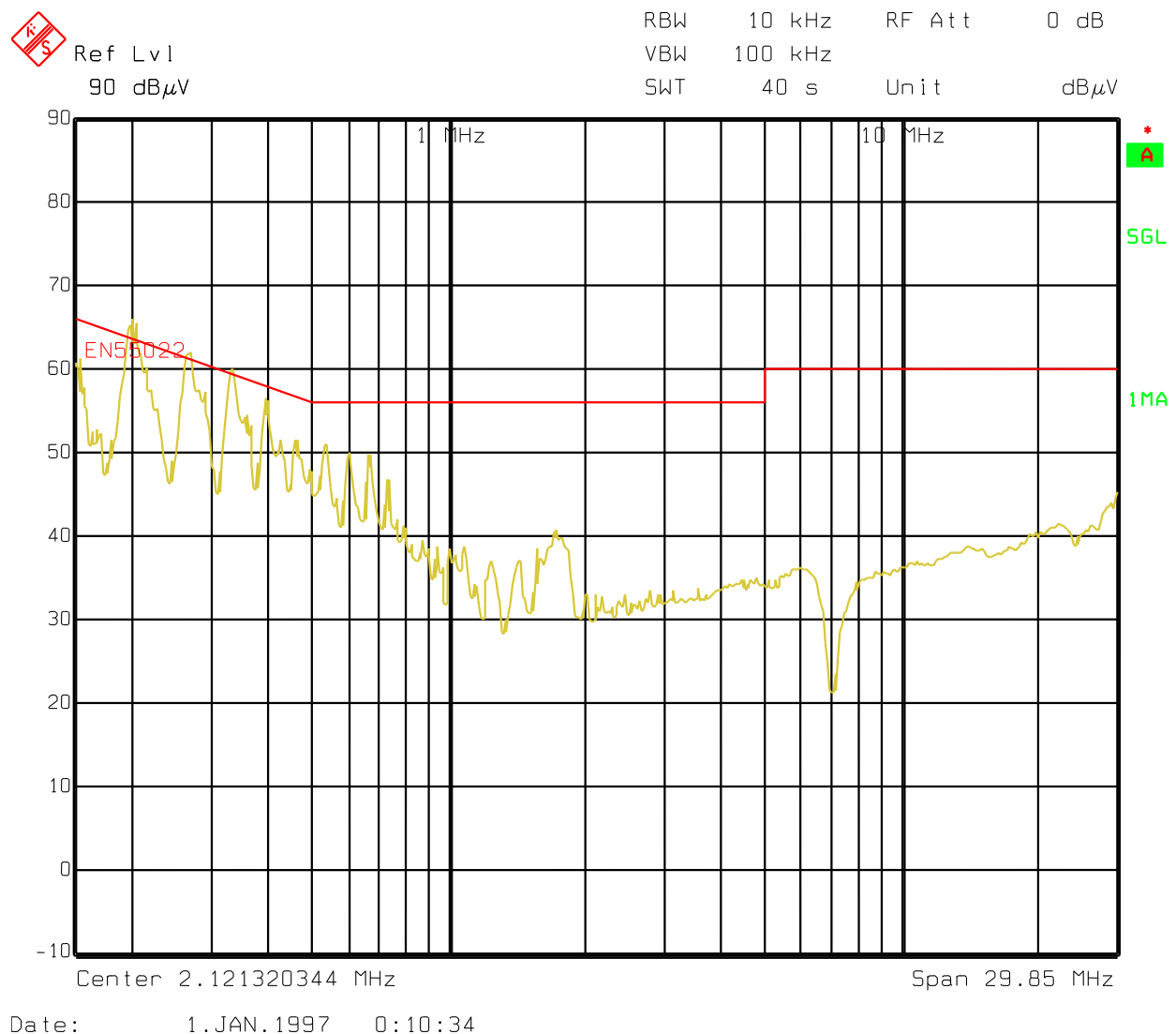
Name	Temperature	
Transformer T100	89.1°C	
Mosfet Q100	70.0°C	
Diode D101	98.3°C	
Diode D103	64.5°C	

10 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 of the converter has been connected to the ground of the LISN.

Input voltage = 110VAC

Load current = 2.2A



PMP30251_RevB Test Results



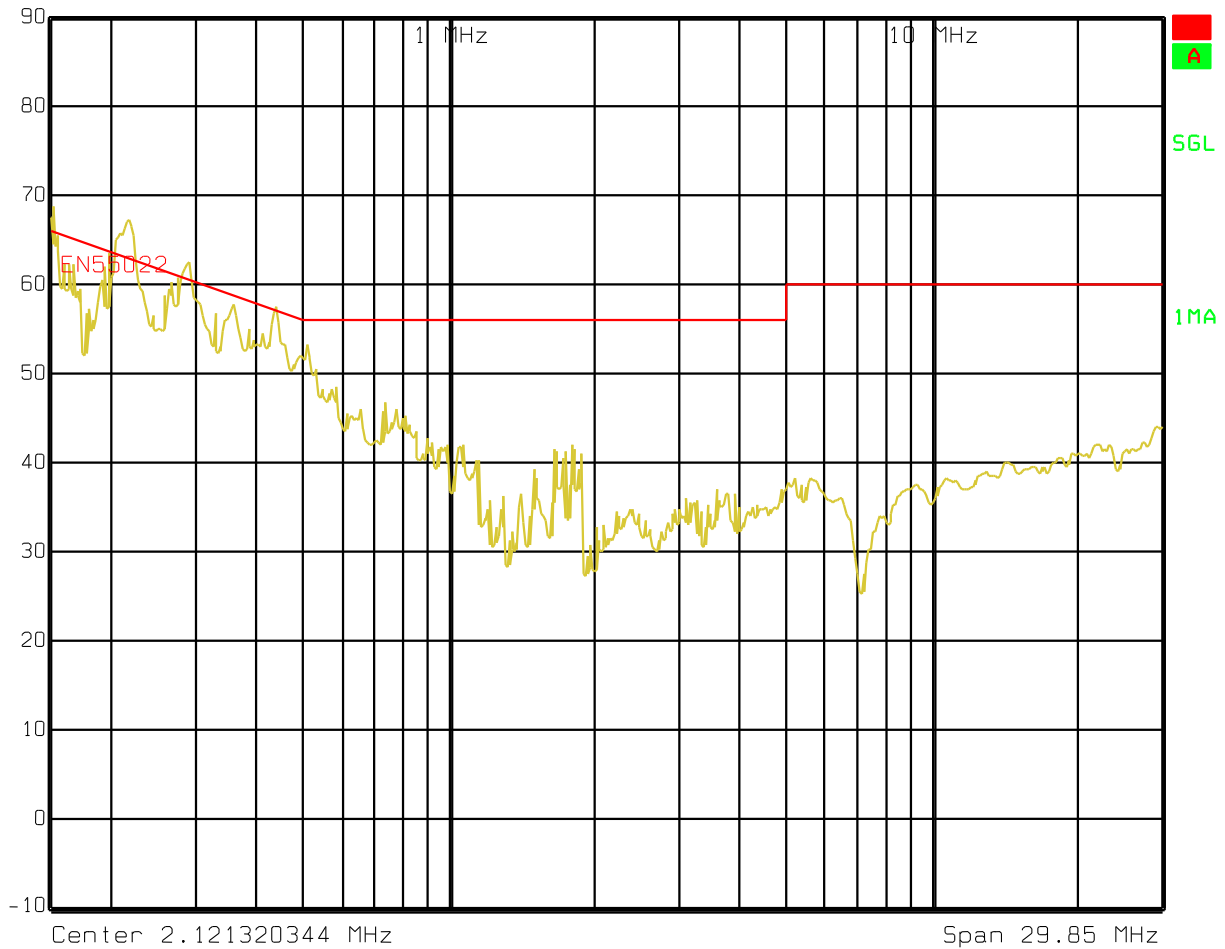
Input voltage = 230VAC

Load current = 2.2A



Ref Lvl
90 dB μ V

RBW 10 kHz RF Att 0 dB
VBW 100 kHz
SWT 88 s Unit dB μ V



Date: 1.JAN.1997 0:05:10

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