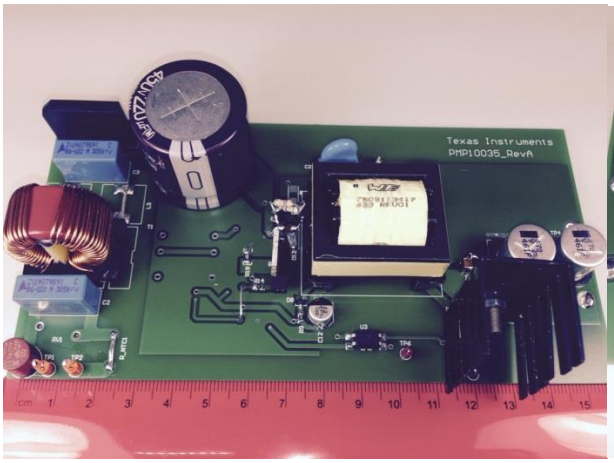
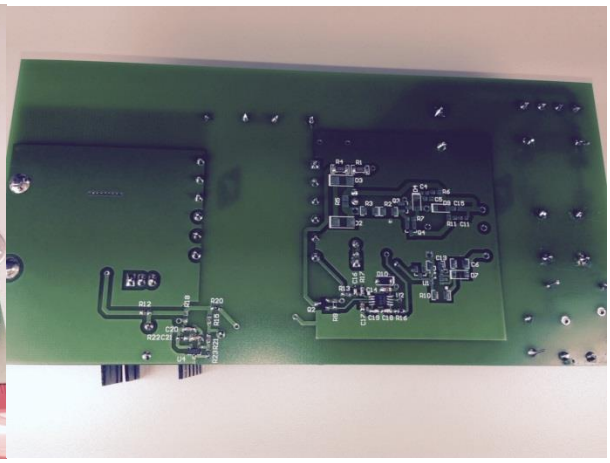
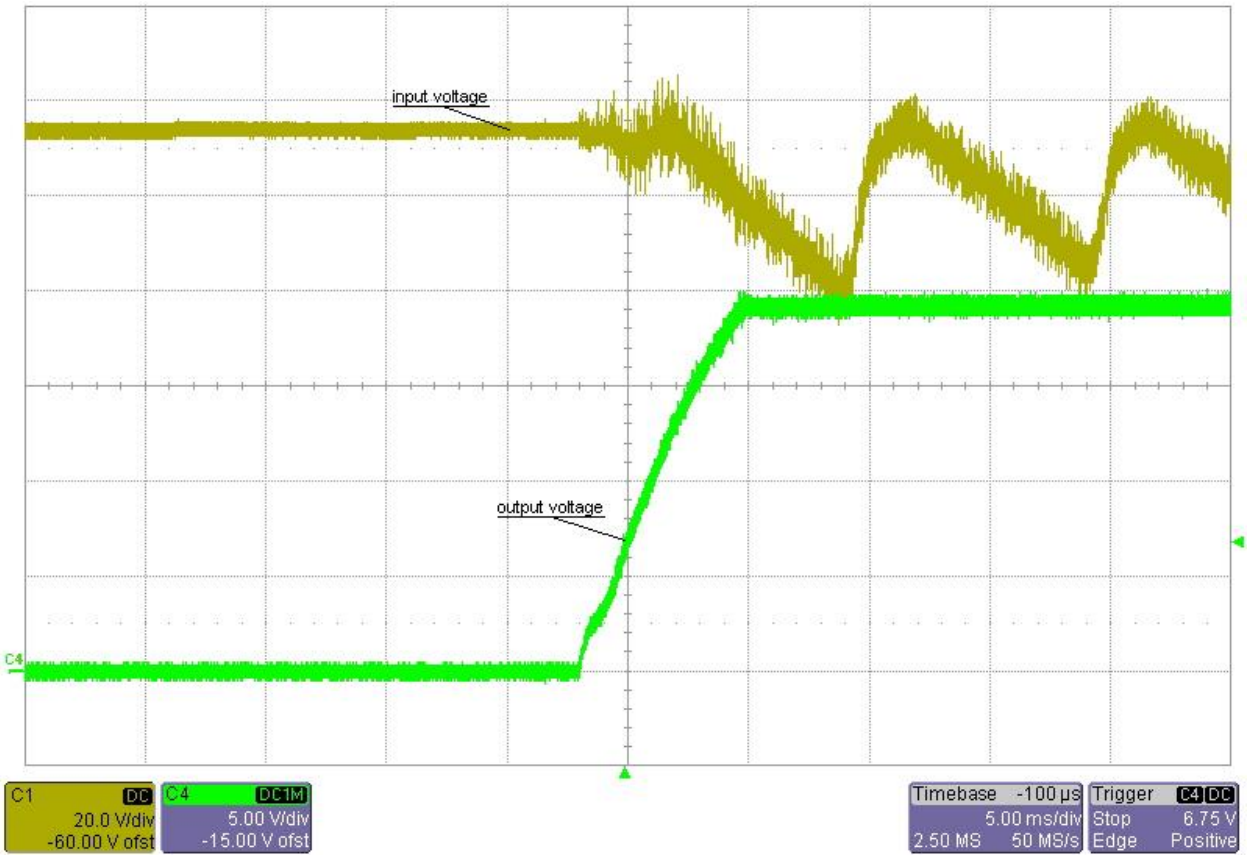


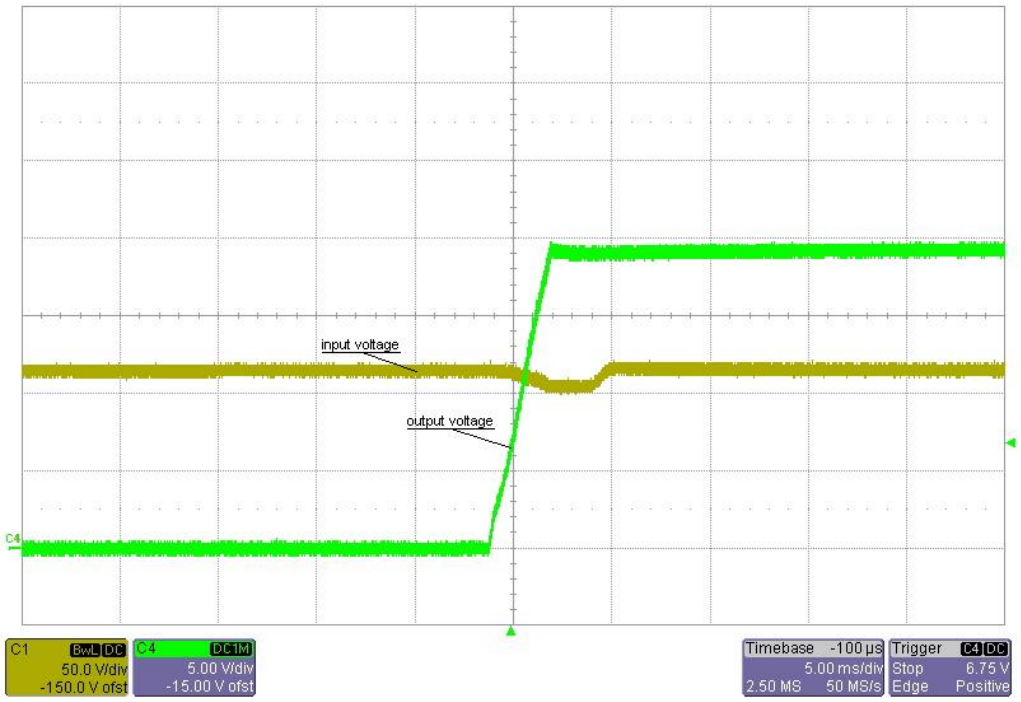


1 Startup

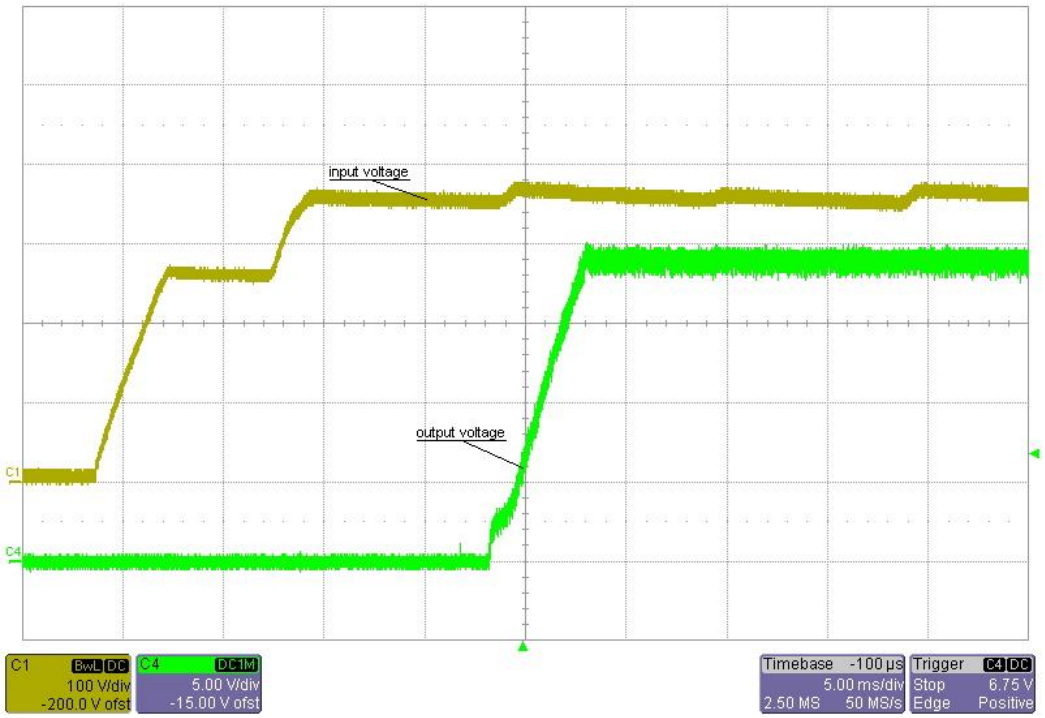
Input voltage = 85VAC
Load current = full load (3.84A)



Input voltage = 85VAC
Load current = no load

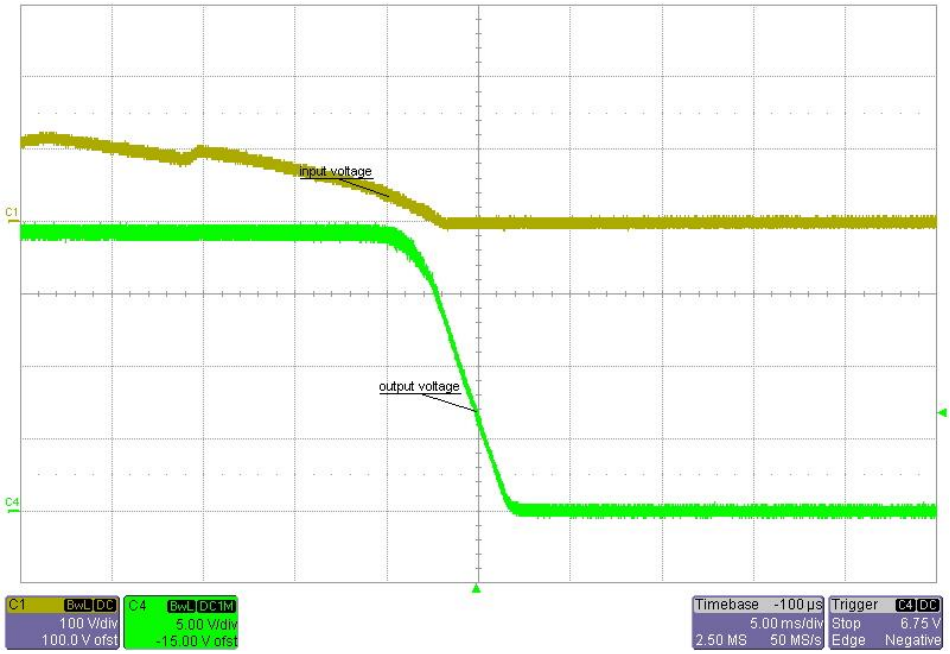


Input voltage = 265VAC
Load current = full load (3.84A)

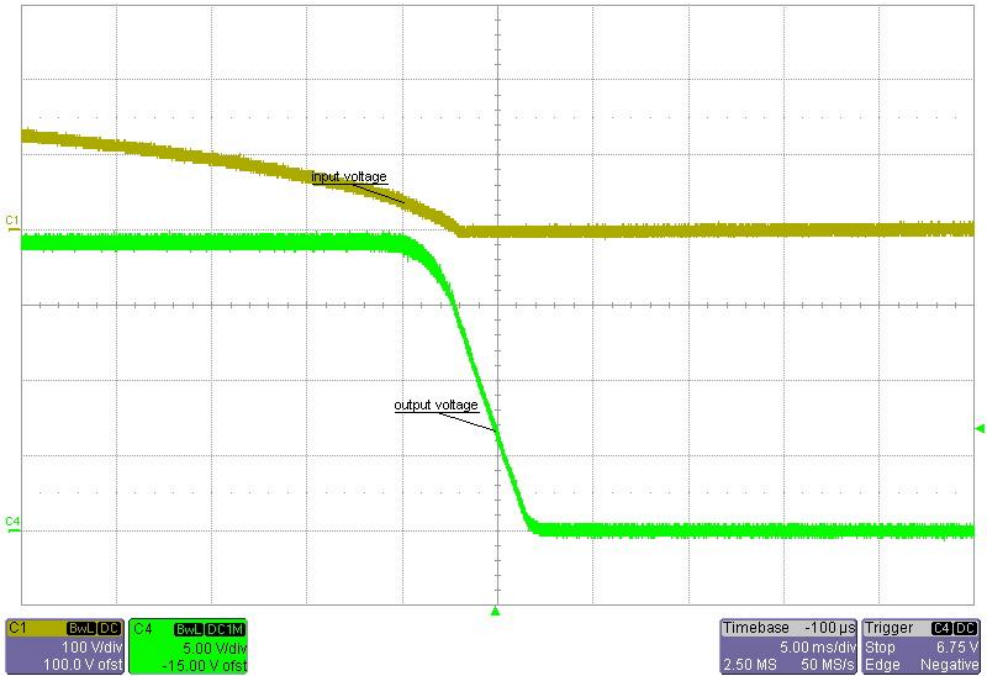


2 Shutdown

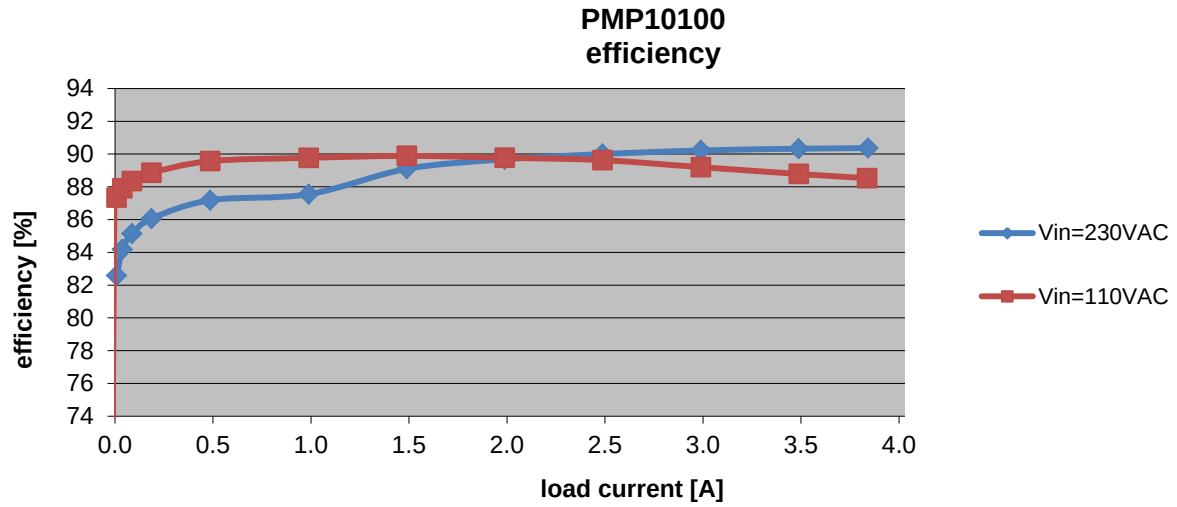
Input voltage = 85VAC
Load current = full load (3.84A)



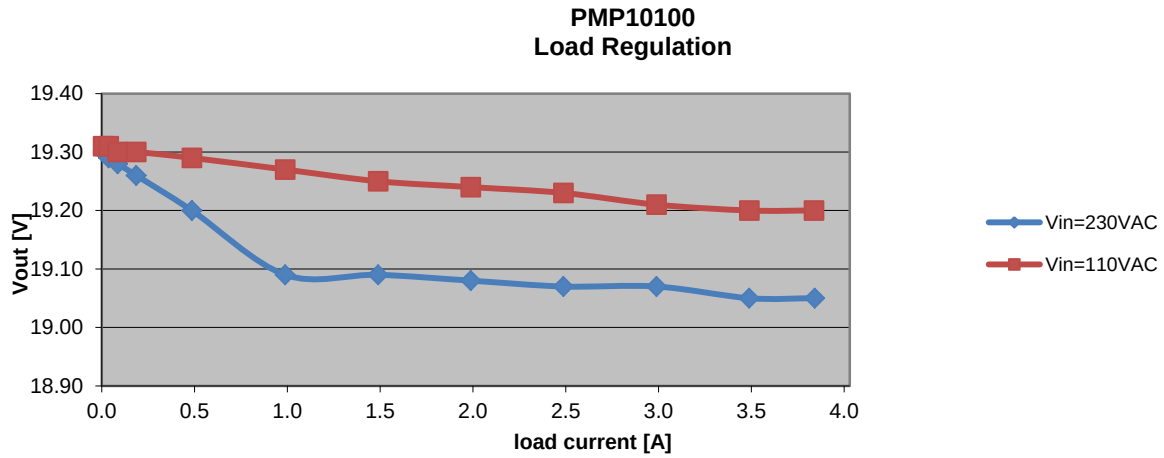
Input voltage = 265VAC
Load current = full load (3.84A)



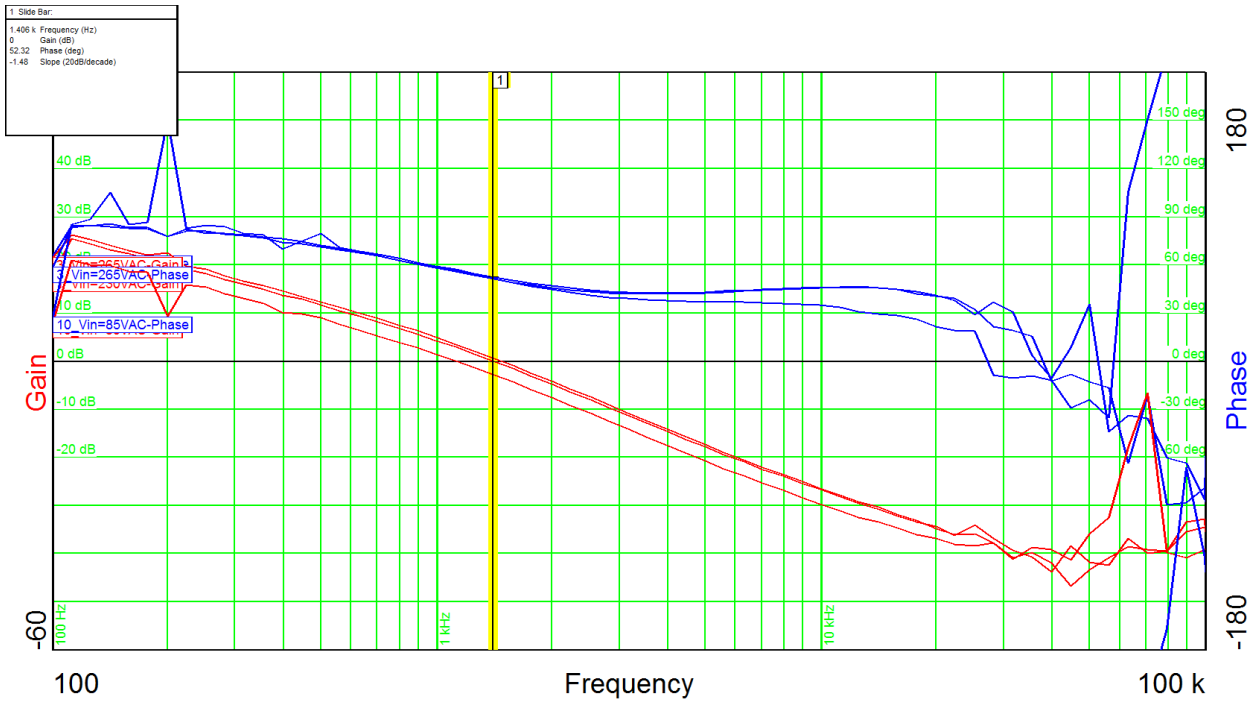
3 Efficiency



4 Load regulation



5 Control Loop Frequency Response



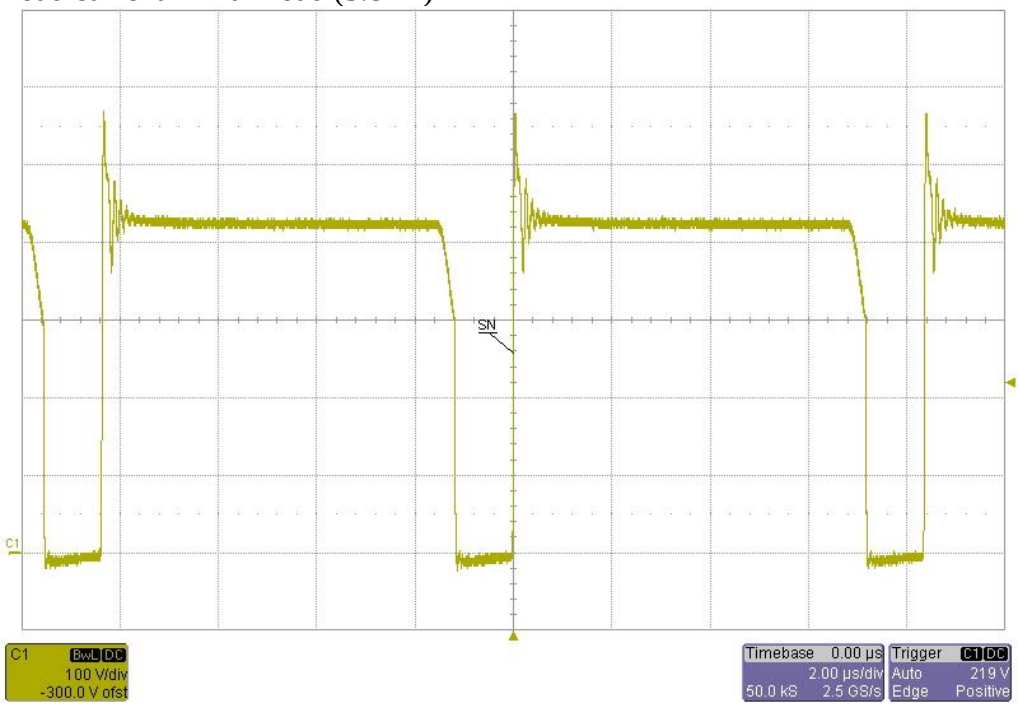
Output power = 19.5V@3.84A
Input voltage = 85VAC
Phase margin = 56°
Bandwidth = 1.1kHz

Output power = 19.5V@3.84A
Input voltage = 230VAC
Phase margin = 52°
Bandwidth = 1.4kHz

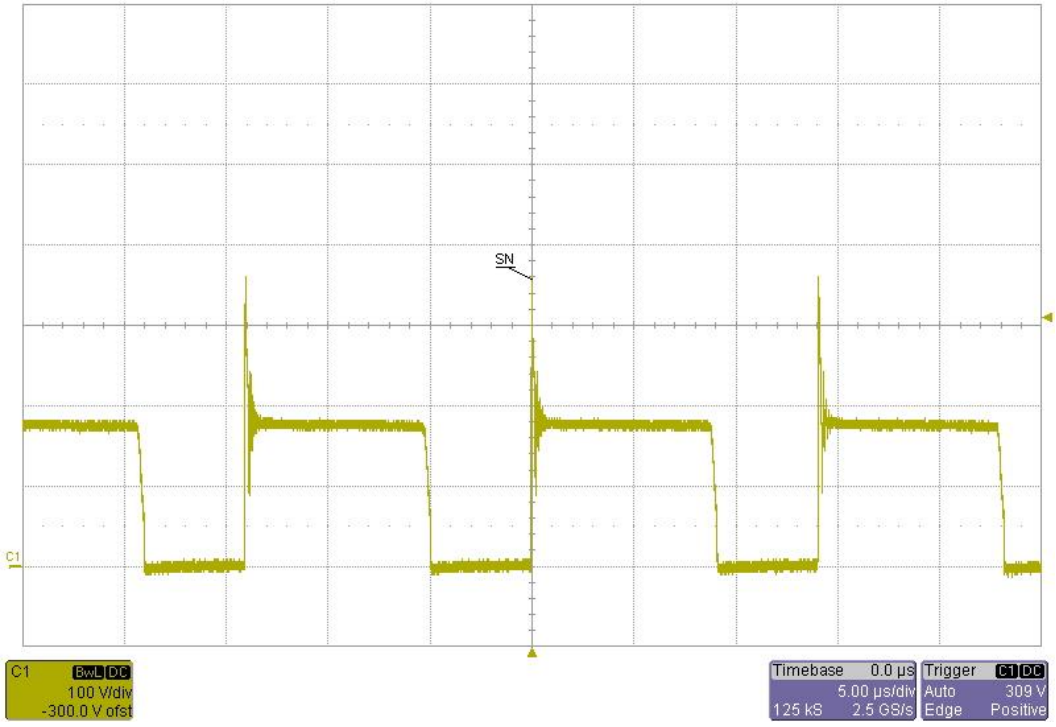
Output power = 19.5V@3.84A
Input voltage = 265VAC
Phase margin = 51°
Bandwidth = 1.5kHz

6 Switch Node

Input voltage = 265VAC
Load current = full load (3.84A)

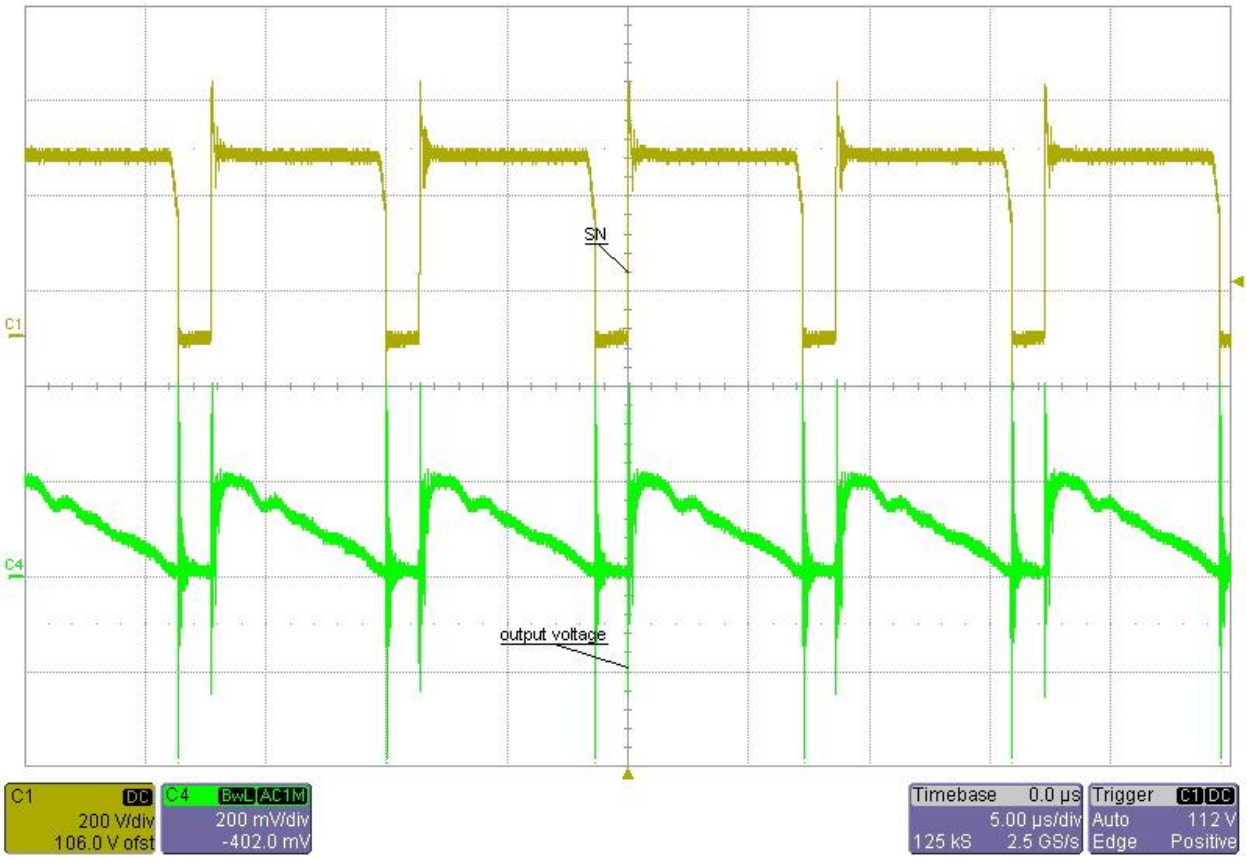


Input voltage = 85VAC
Load current = full load (3.84A)



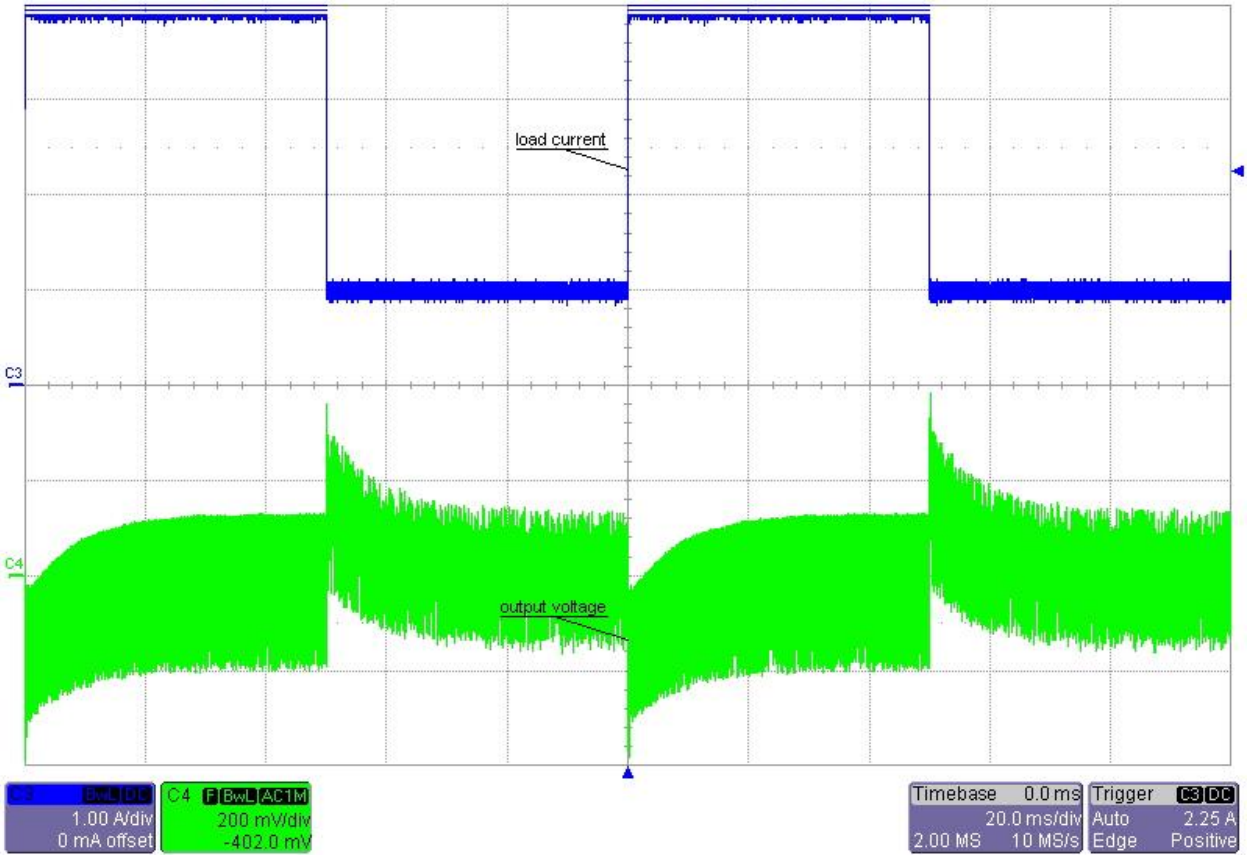
7 Output ripple voltage

Input voltage = 230VAC
Load current = full load (3.84A)



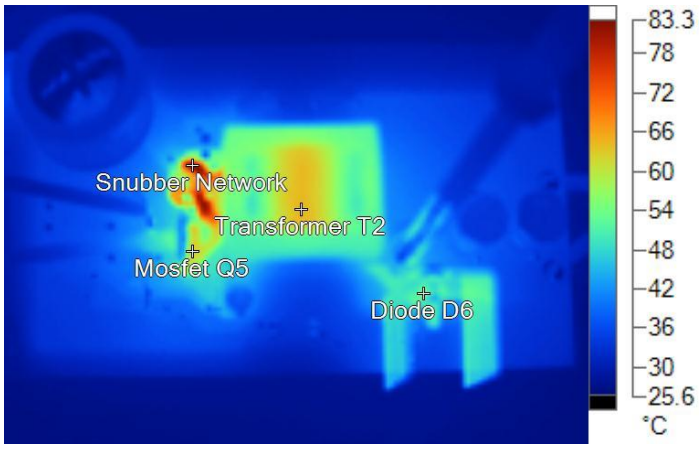
8 Load Transients

Input voltage = 230VAC
Load current = 1A to 4A



9 Thermal Analysis

The images below show the infrared images taken from the FlexCam after 15min at full load (19.5V@3.84A).



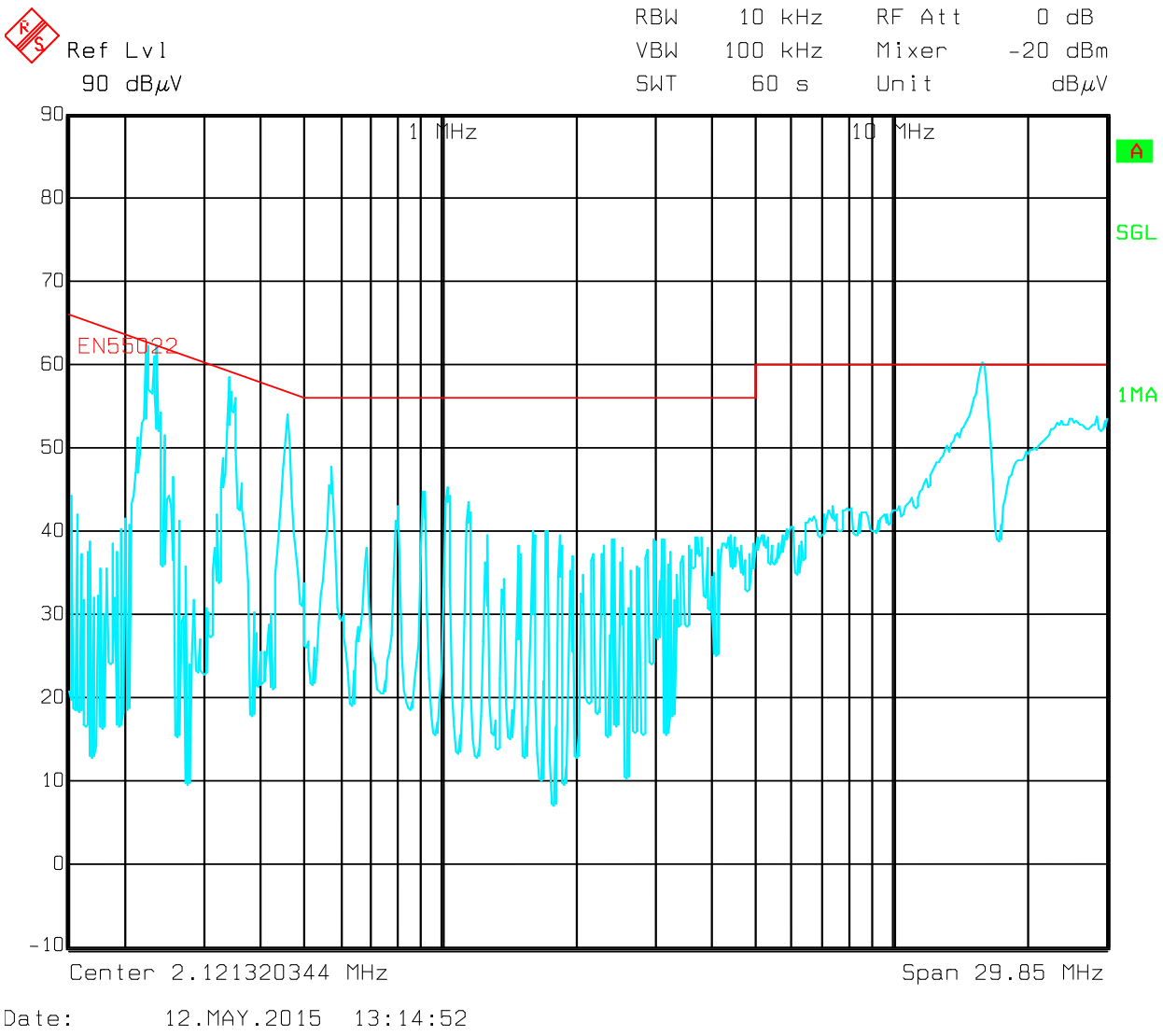
IR20150511_0574 full load Vin=325VDC.is2

Name	Temperature	
Transformer T2	64.3°C	
Mosfet Q5	62.3°C	
Snubber Network	83.3°C	
Diode D6	52.8°C	

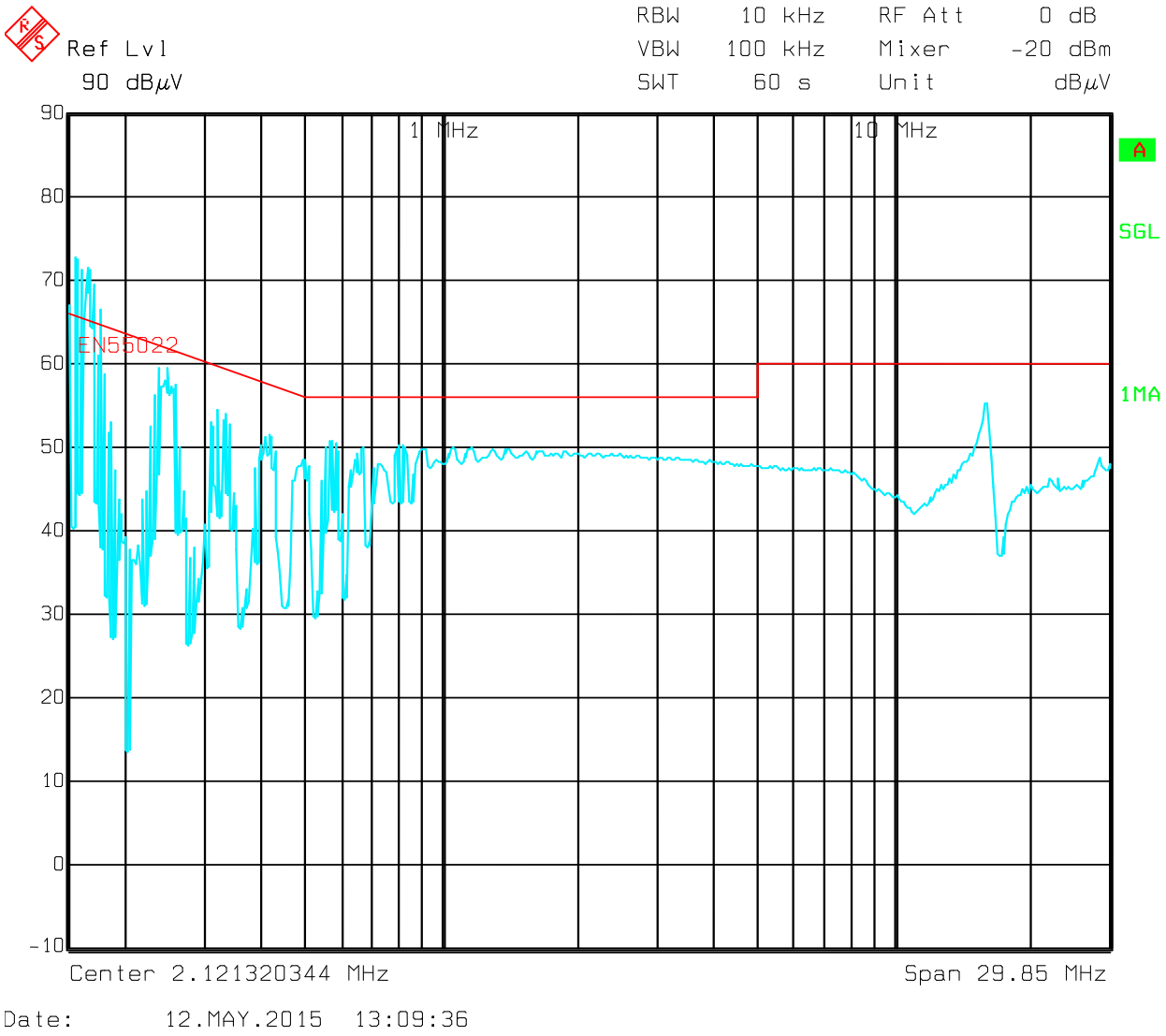
10 EMI Measurement

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 load 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 = 230VAC
Load current = 3.84A



Input voltage = 110VAC
Load current = 3.84A



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