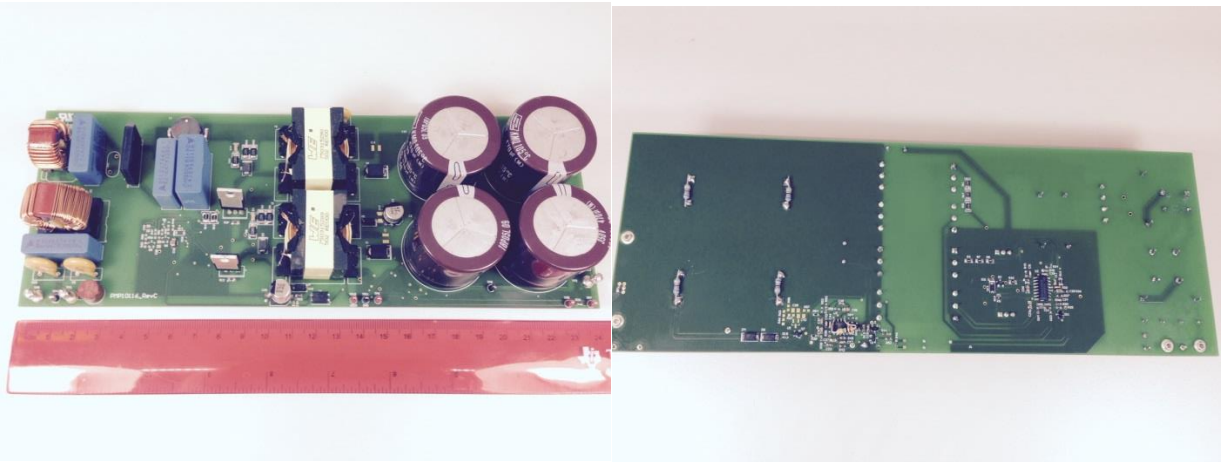
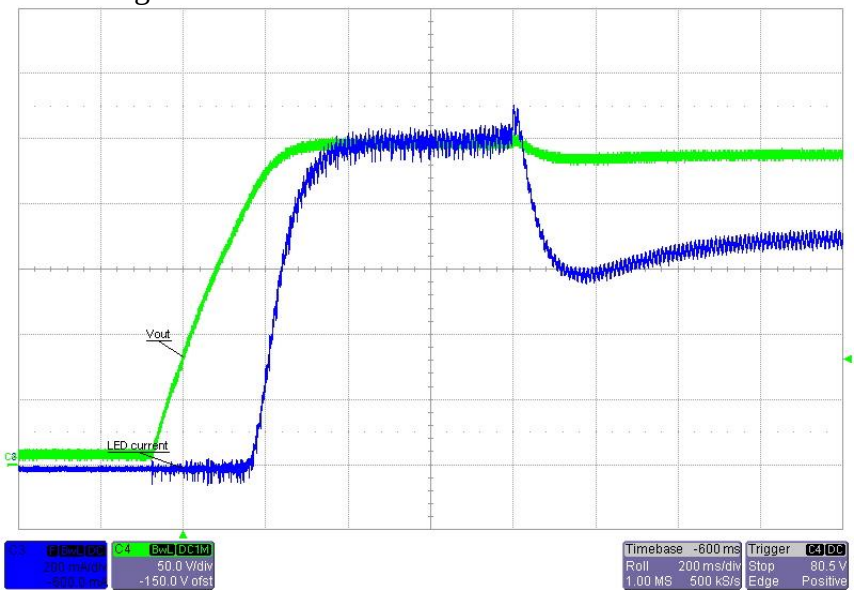


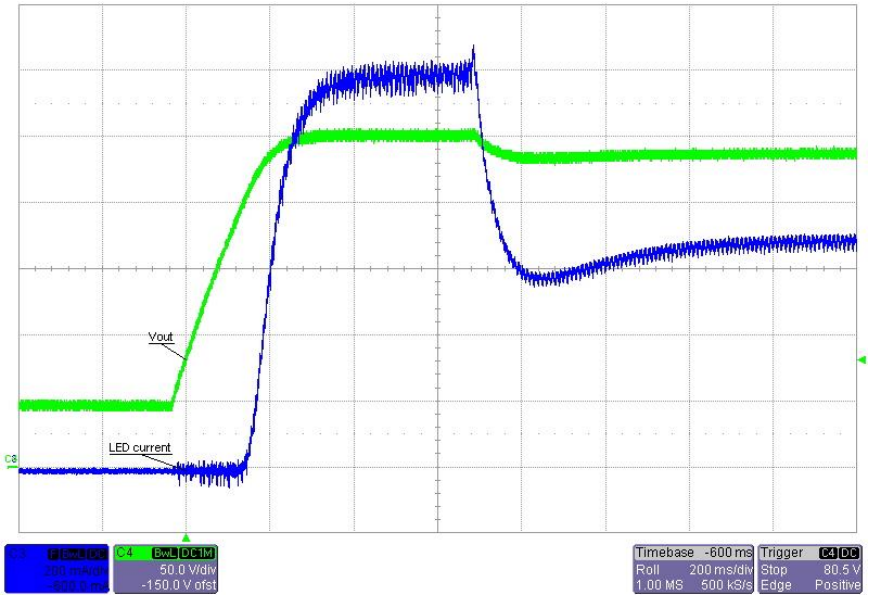
Load: **2 LED strings in parallel. Max. LED current each string: 0.35A**

1 Startup

Input voltage = 176VAC
LED current = 0.7A
LED voltage = 233V

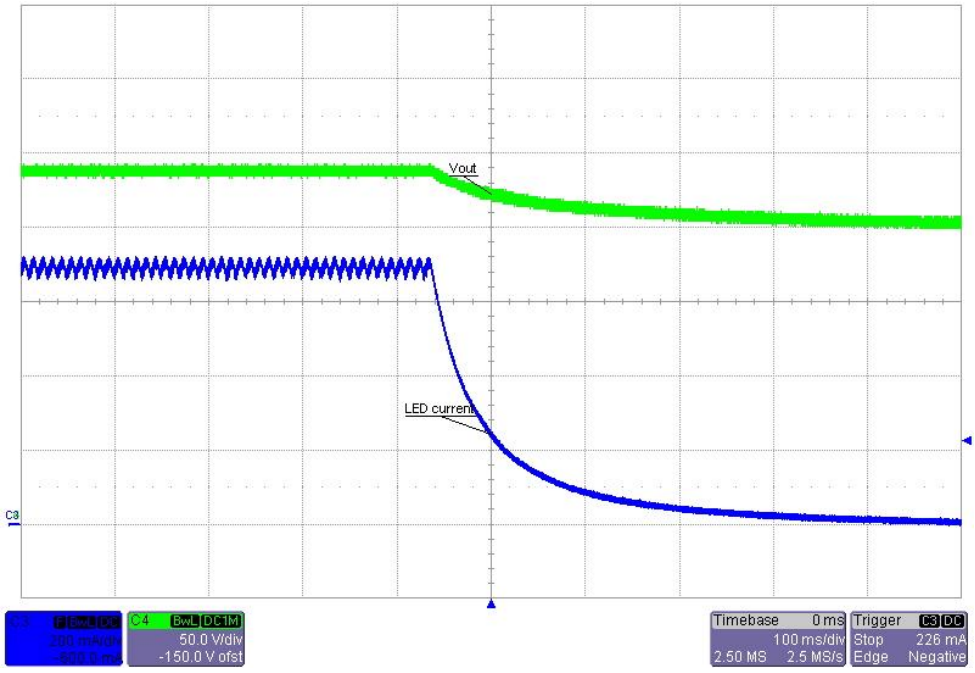


Input voltage = 264VAC
LED current = 0.7A
LED voltage = 232V

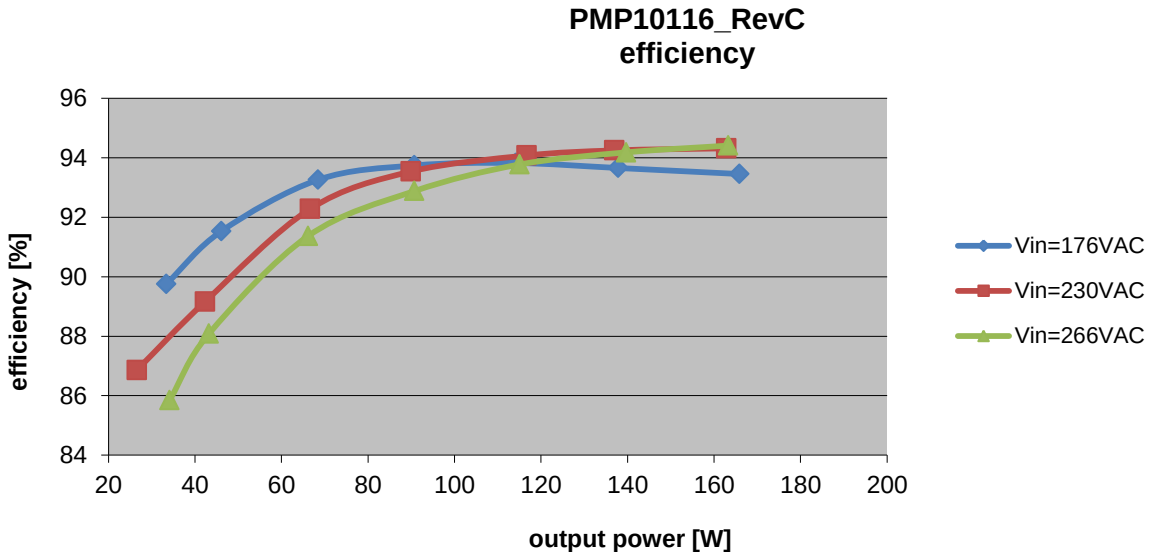


2 Shutdown

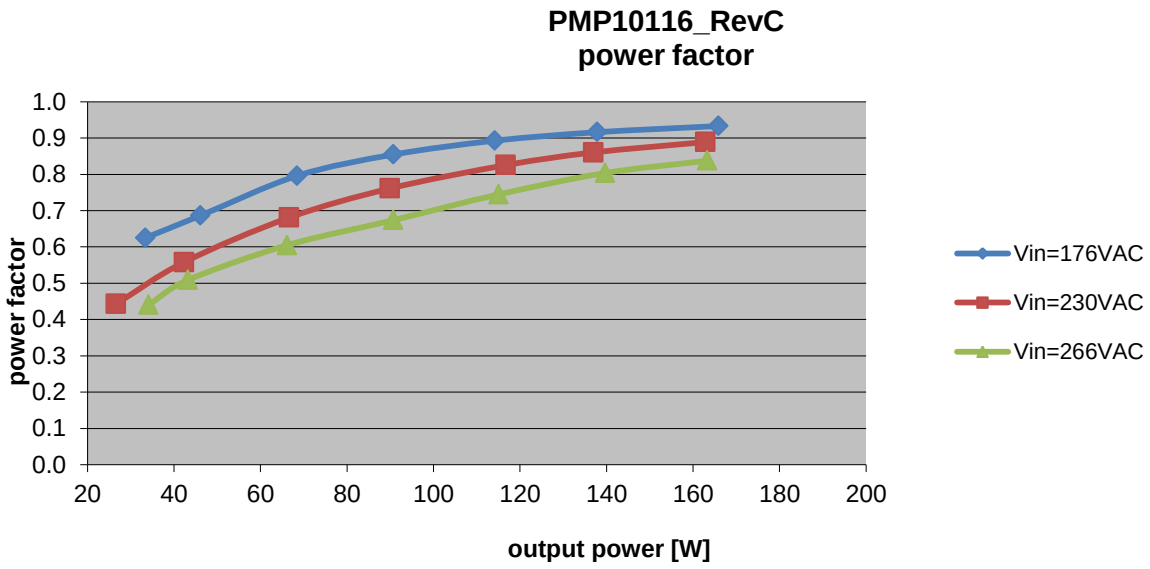
Input voltage = 230VAC
LED current = 0.7A
LED voltage = 234V



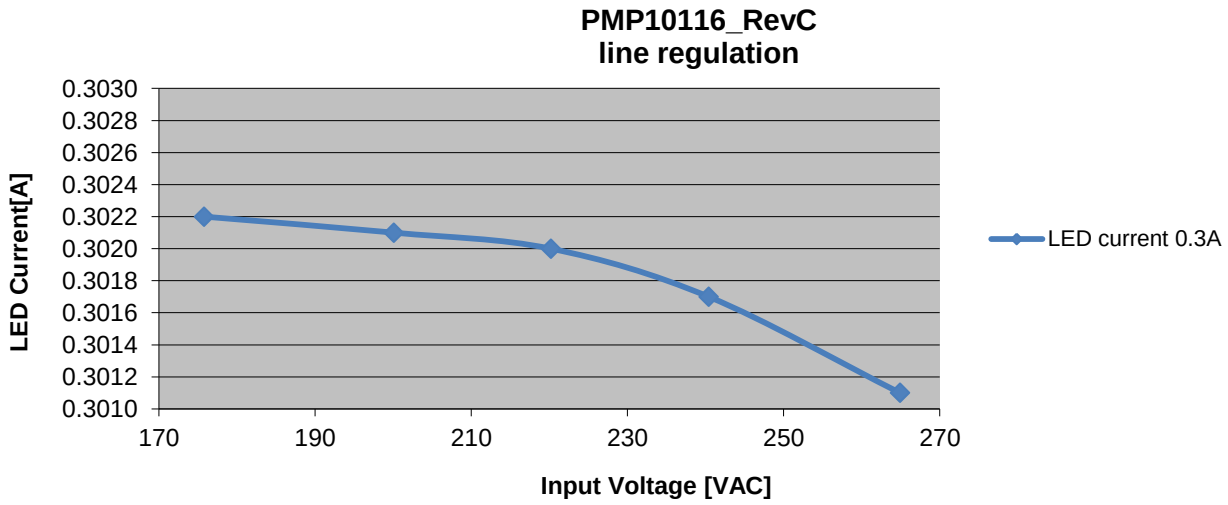
3 Efficiency

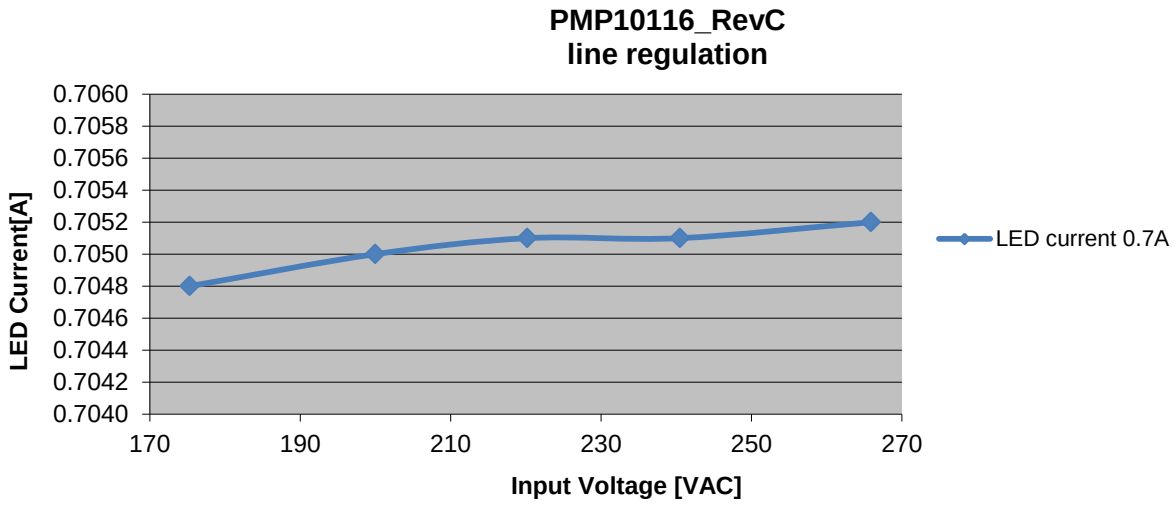


4 Power Factor



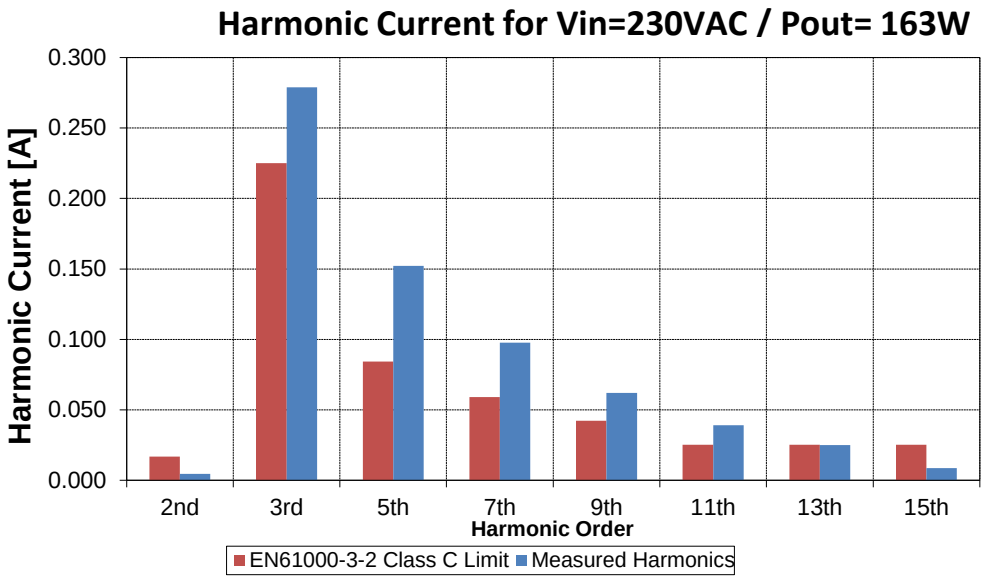
5 Line Regulation



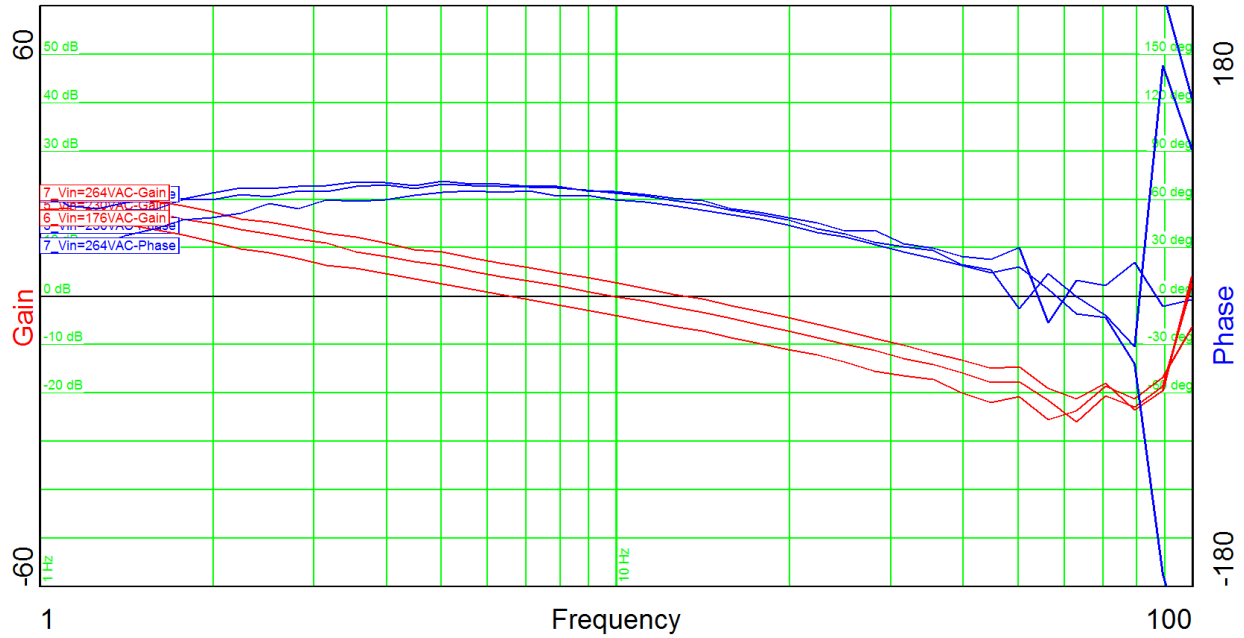


6 Harmonic Current

Input voltage = 230VAC
LED current = 0.7A



5 Control Loop Frequency Response



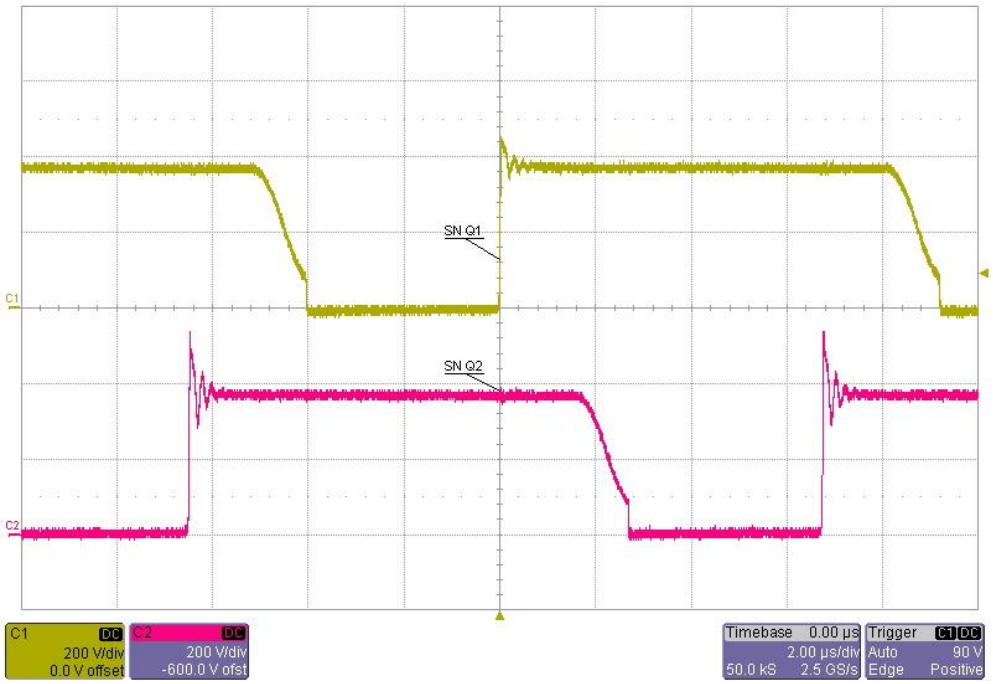
Input Voltage = 176VAC
LED Current = 0.71A
LED Voltage = 233V
Phase margin = 69°
Bandwidth = 7Hz

Input Voltage = 230VAC
LED Current = 0.71A
LED Voltage = 234V
Phase margin = 74°
Bandwidth = 10Hz

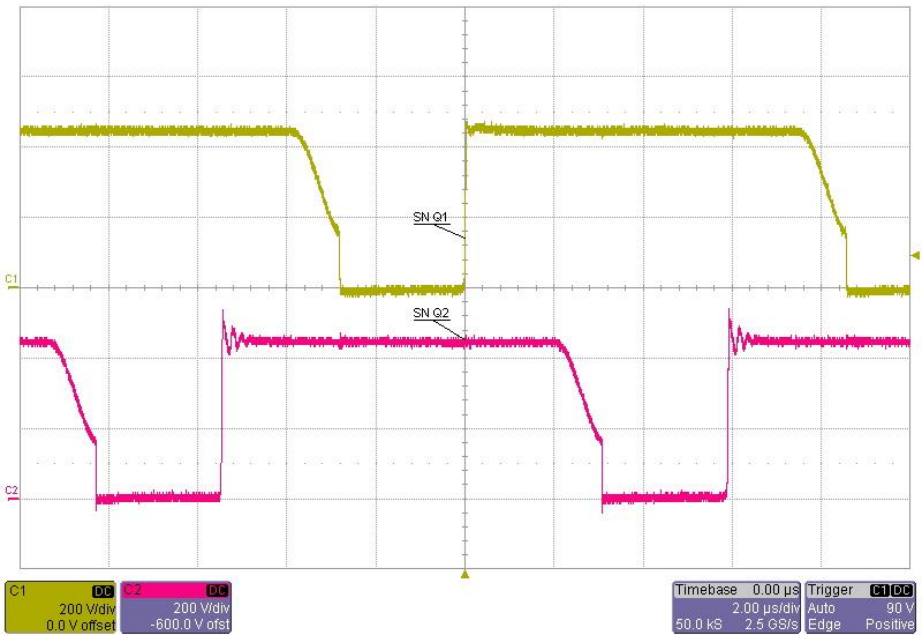
Input voltage = 264VAC
LED Current = 0.71A
LED Voltage = 232V
Phase margin = 55°
Bandwidth = 13Hz

6 Switch Node

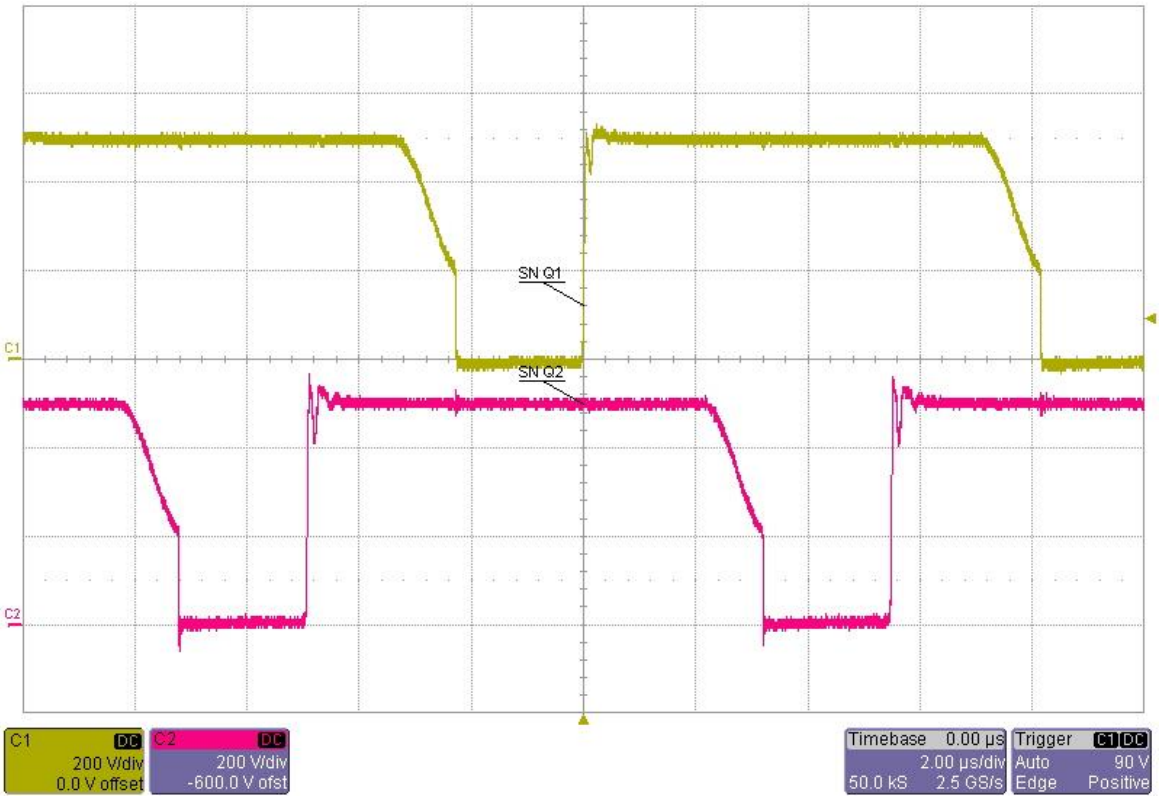
Input voltage = 248VDC
LED current = 0.7A



Input voltage = 248VDC
LED current = 0.7A

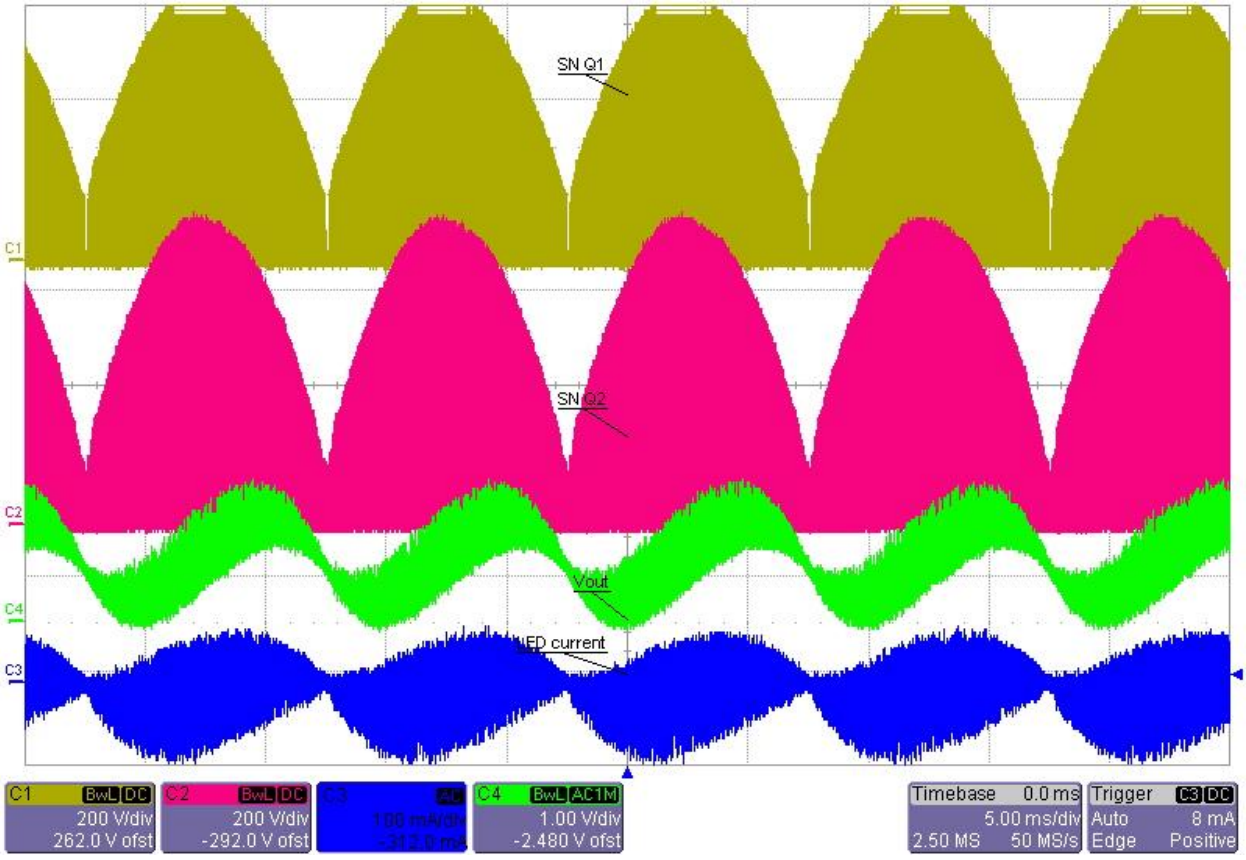


Input voltage = 374VDC
LED current = 0.7A



7 Output ripple voltage and LED current

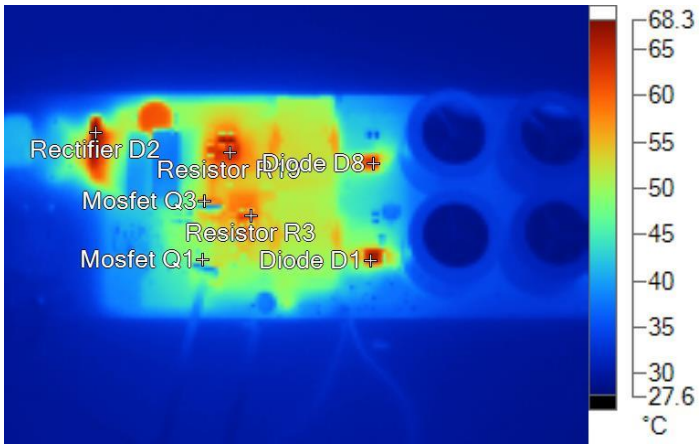
Input voltage = 230VAC
LED current = 0.71A
LED voltage = 234V



8 Thermal Analysis

The images below show the infrared images taken from the FlexCam after 15min at 0.71A LED current.

Input voltage = 230VAC
Output power = 232V@0.71A
Ambient temperature = 25°C
No heatsink, no airflow

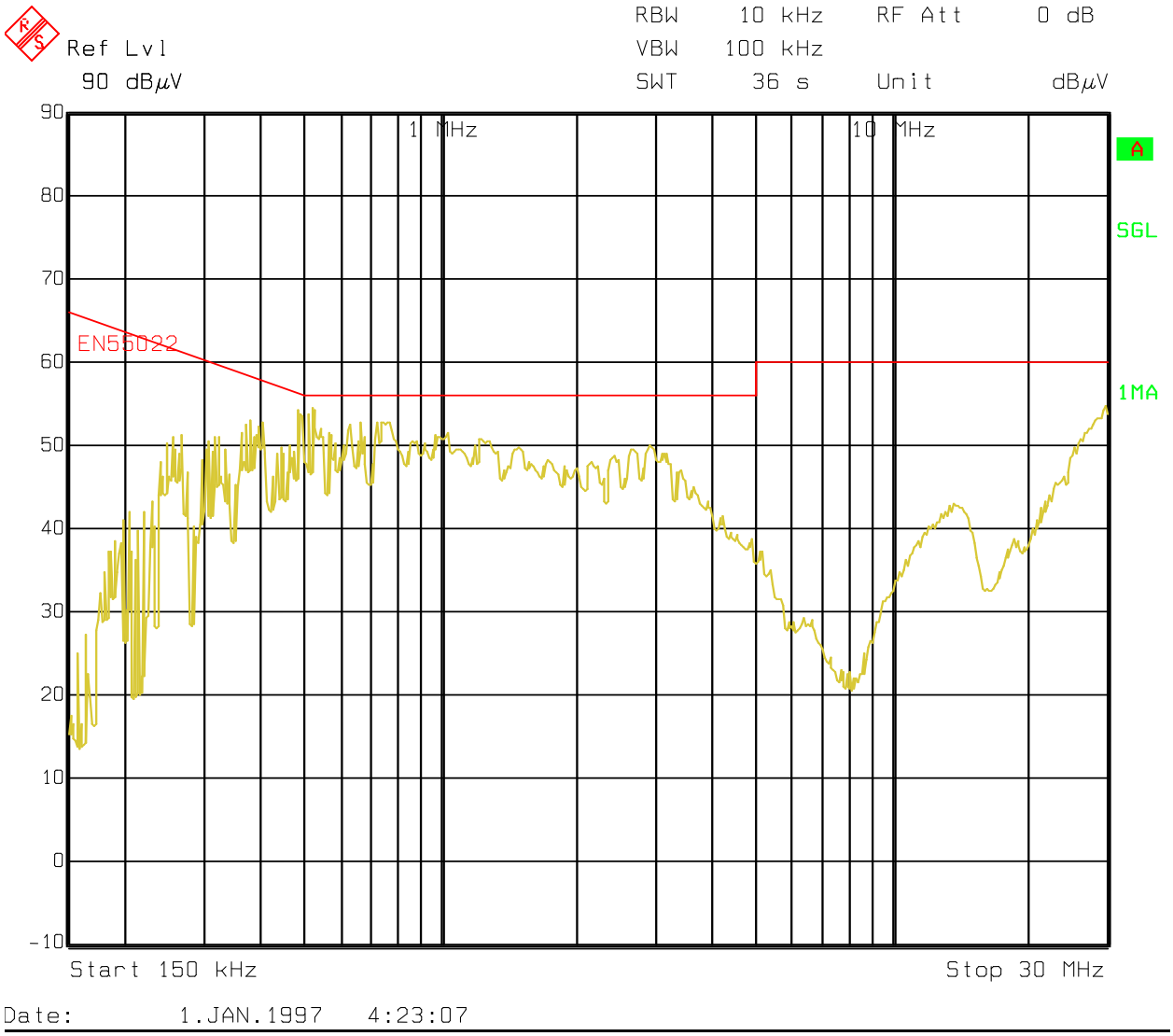


0623_Vin=230VAC Vout=232V@0.71A Top.is2

Name	Temperature	
Rectifier D2	68.3°C	
Resistor R19	65.3°C	
Resistor R3	62.8°C	
Mosfet Q1	52.3°C	
Diode D8	63.4°C	
Mosfet Q3	54.1°C	
Diode D1	64.3°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 load was connected to a LISN and an isolation transformer; the load was a LED string (232V@0.71A), while the input voltage was 230Vac.The receiver was set to Quasi-peak detector, 10 KHz bandwidth.
The secondary side GND of the converter has been connected to the ground of the LISN.



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