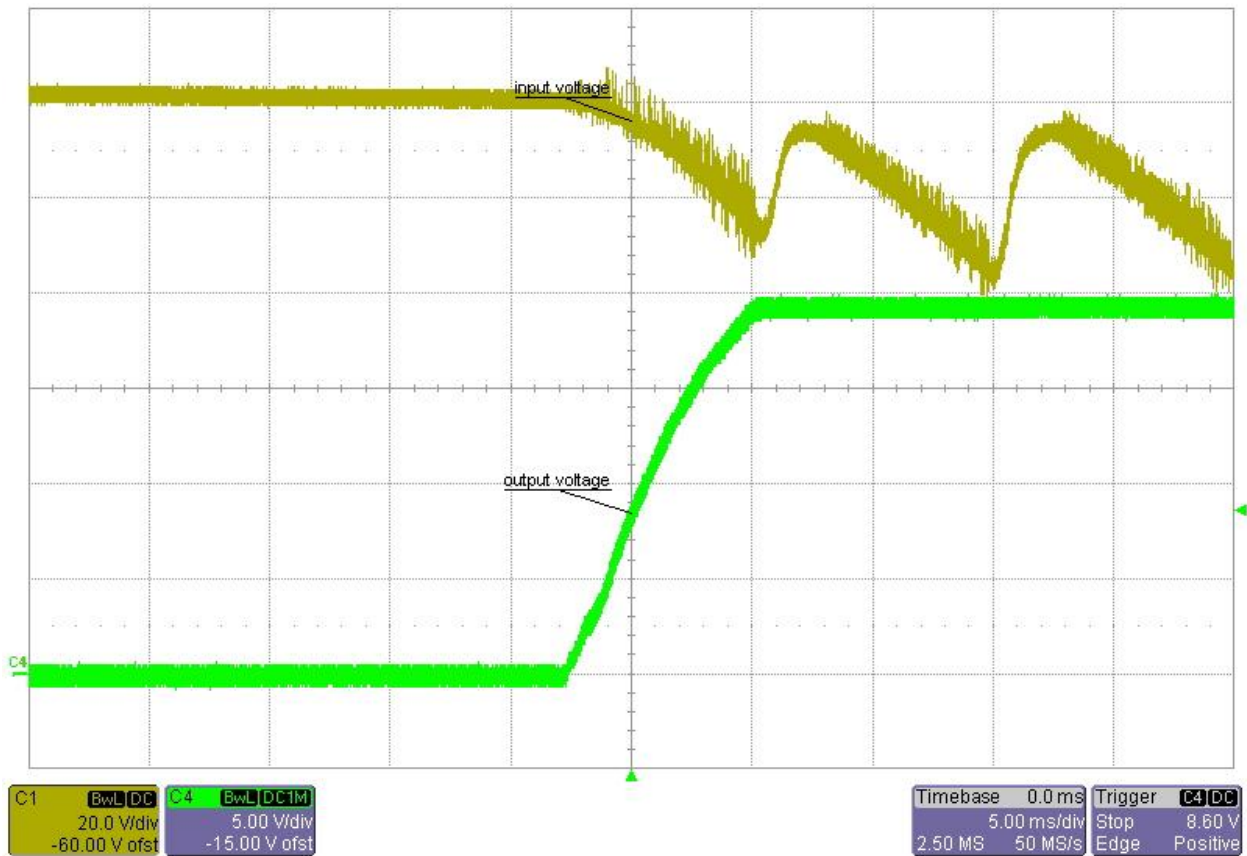


## 1 Startup

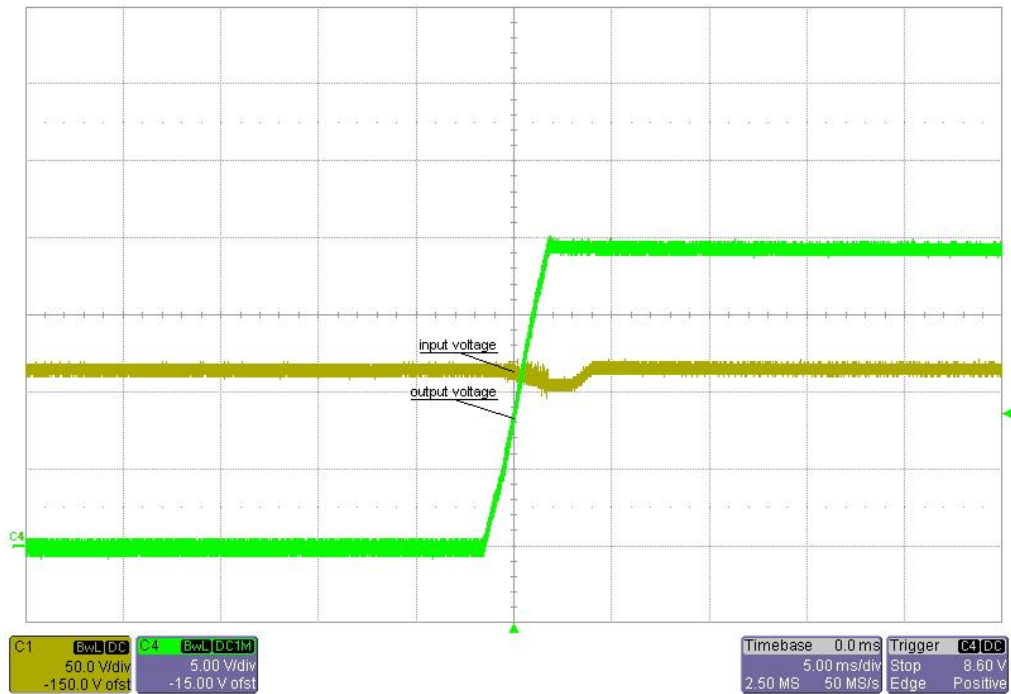
Input voltage = 85VAC  
 Load current = full load (3.84A)



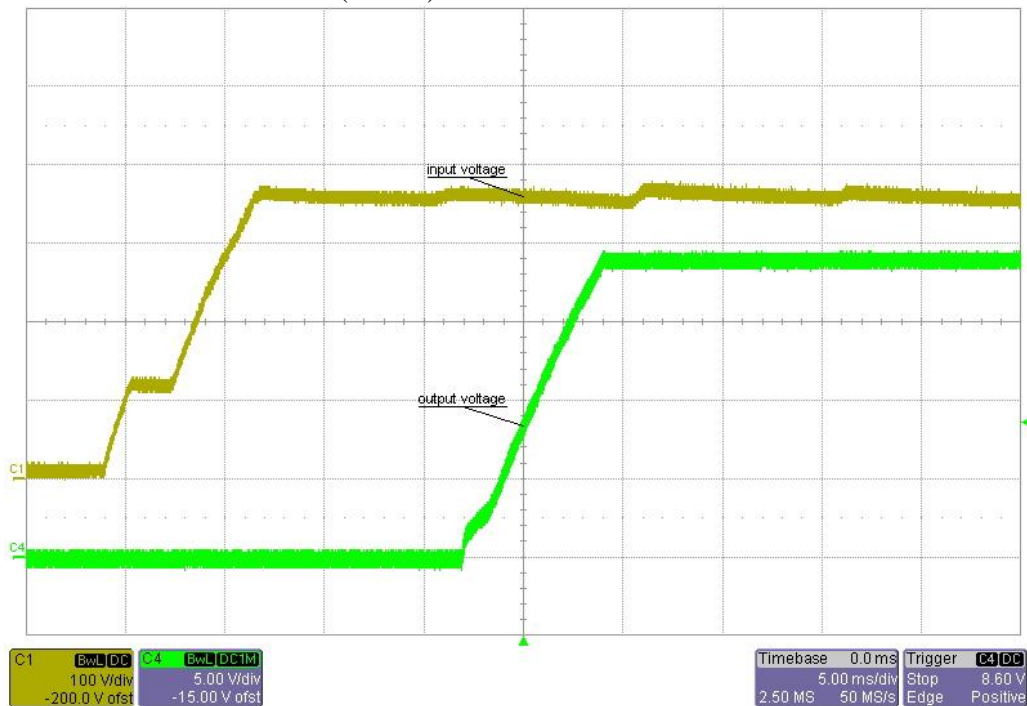
# PMP10035\_RevC Test Results



Input voltage = 85VAC  
Load current = no load

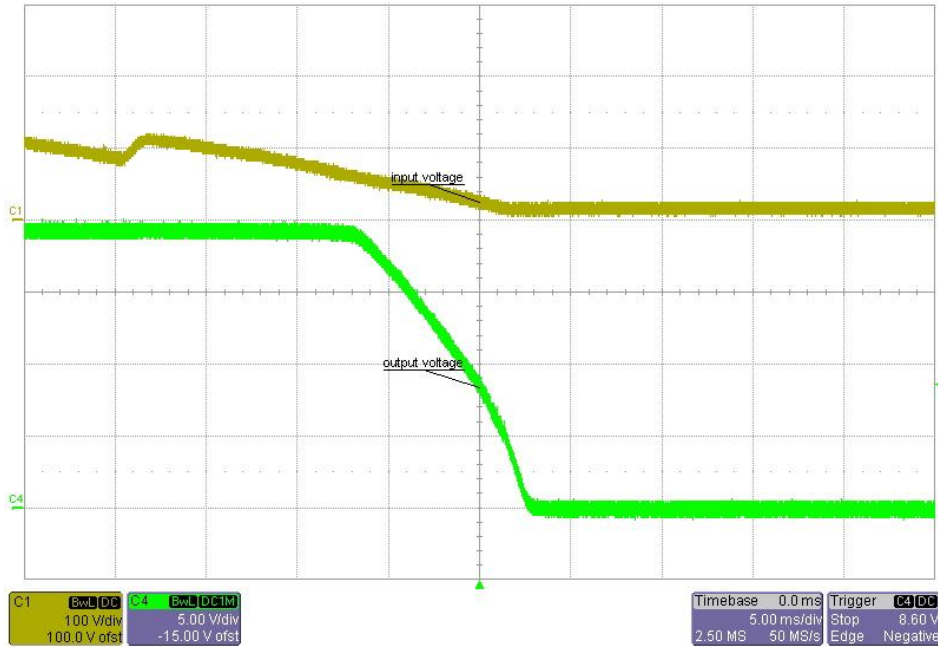


Input voltage = 265VAC  
Load current = full load (3.84A)

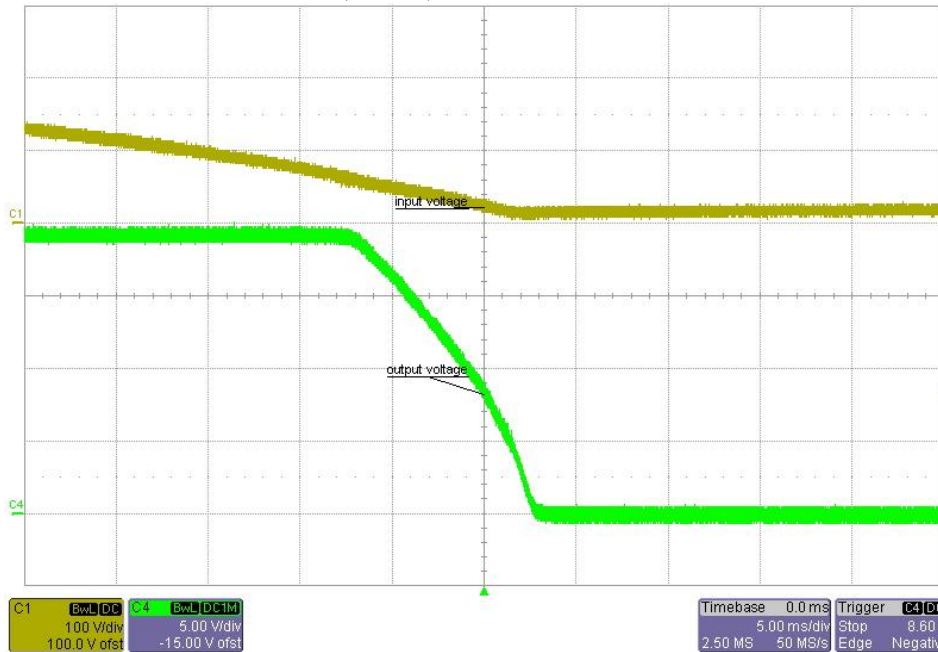


## 2 Shutdown

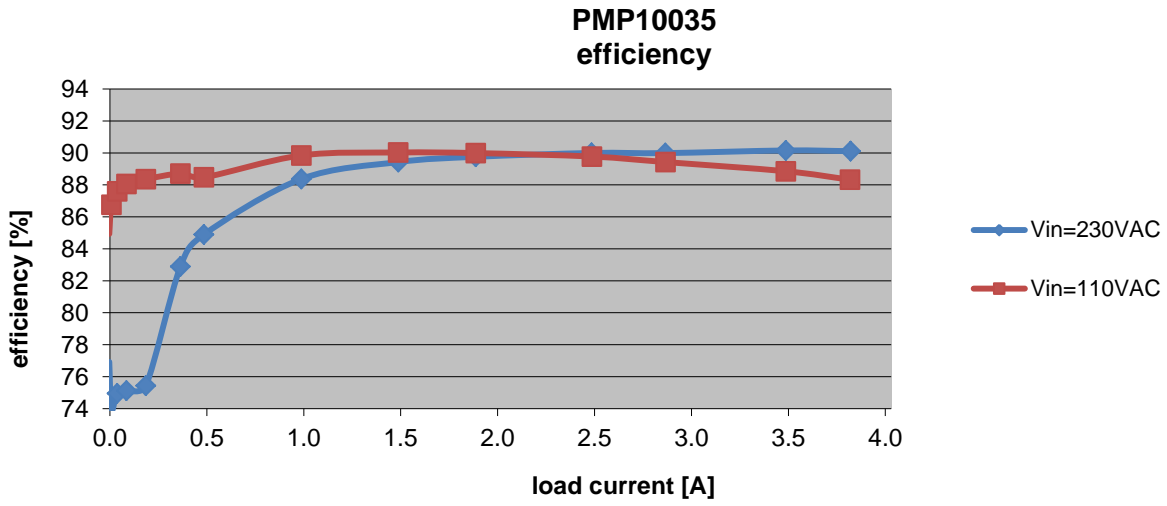
Input voltage = 85VAC  
 Load current = full load (3.84A)



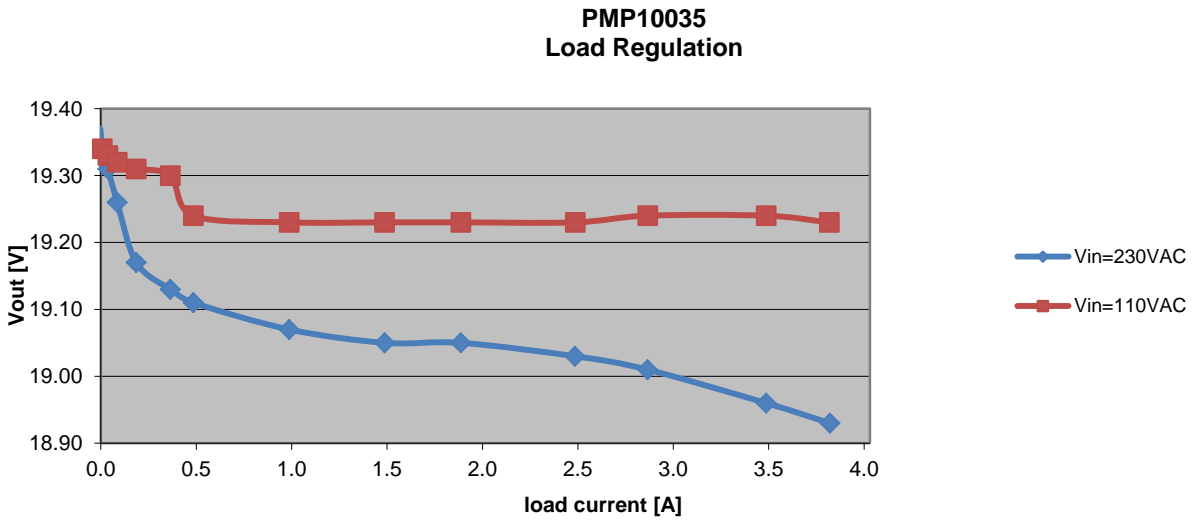
Input voltage = 265VAC  
 Load current = full load (3.84A)



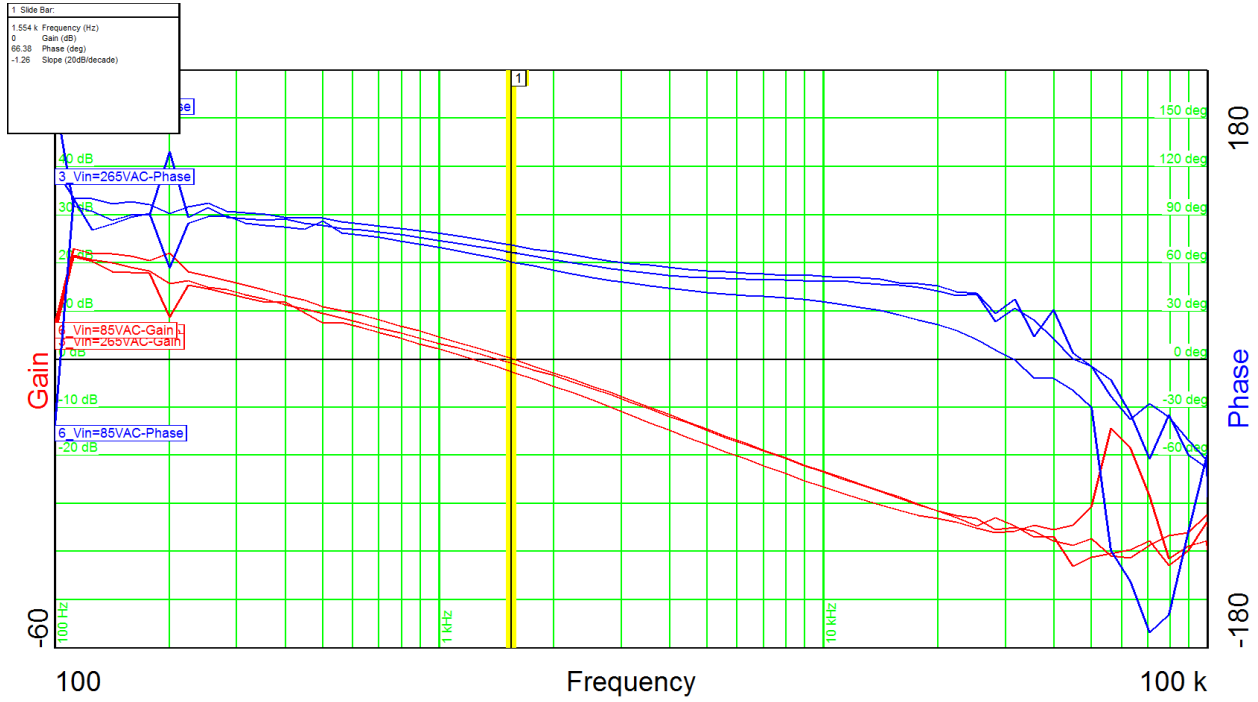
### 3 Efficiency



### 4 Load regulation



### Control Loop Frequency Response



Output power = 19.5V@3.84A  
 Input voltage = 85VAC  
 Phase margin = 66°  
 Bandwidth = 1.2kHz

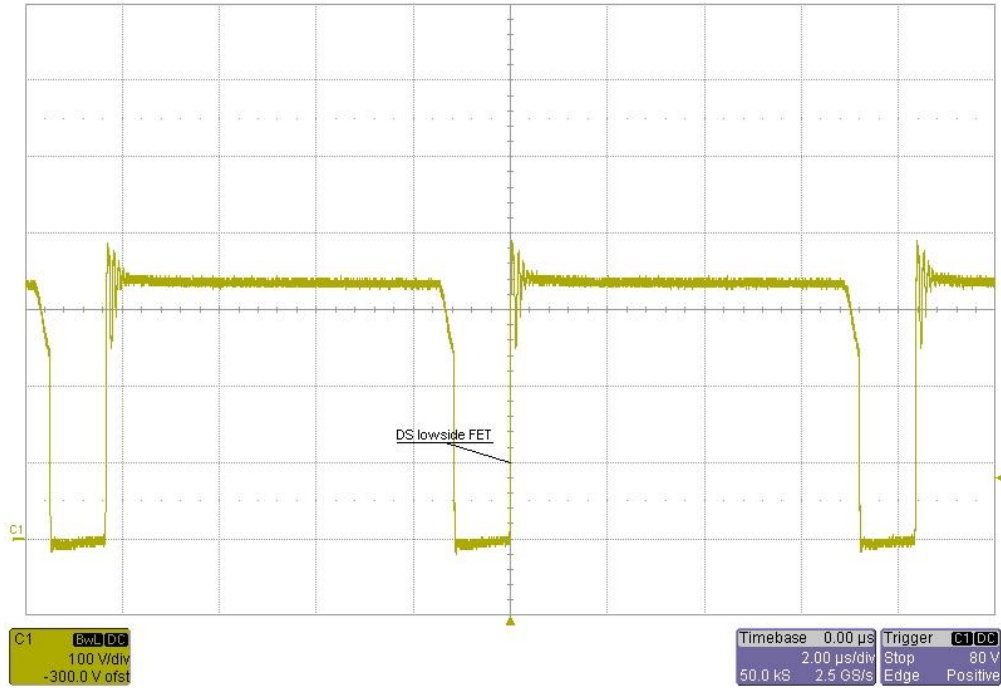
Output power = 19.5V@3.84A  
 Input voltage = 230VAC  
 Phase margin = 66°  
 Bandwidth = 1.6kHz

Output power = 19.5V@3.84A  
 Input voltage = 265VAC  
 Phase margin = 73°  
 Bandwidth = 1.4kHz

## 5 Switch Node

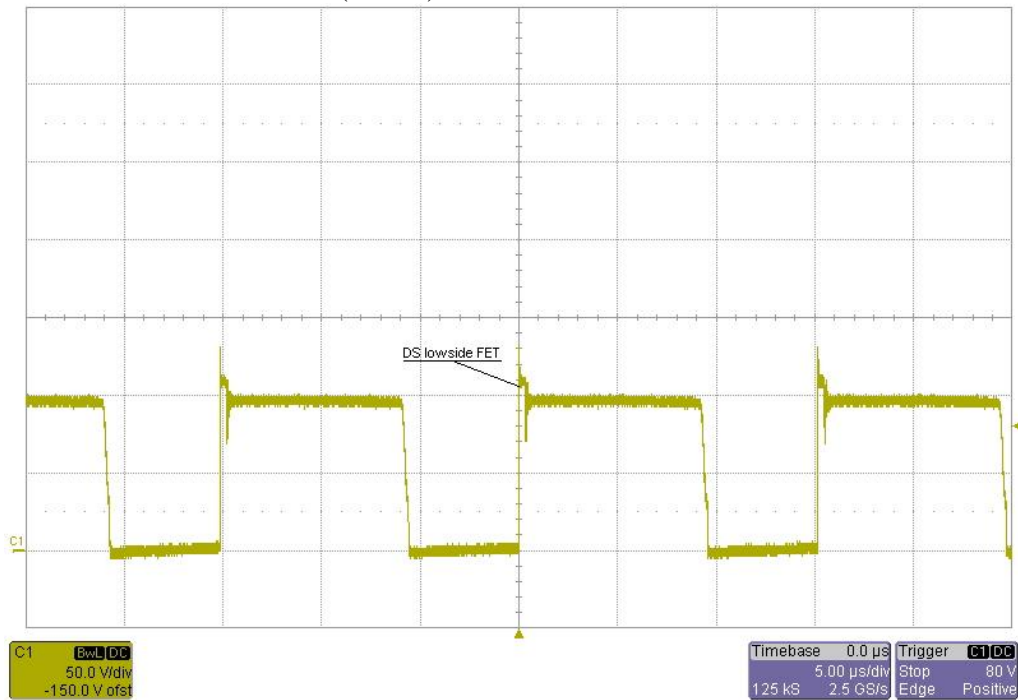
Input voltage = 265VAC

Load current = full load (3.84A)



Input voltage = 85VAC

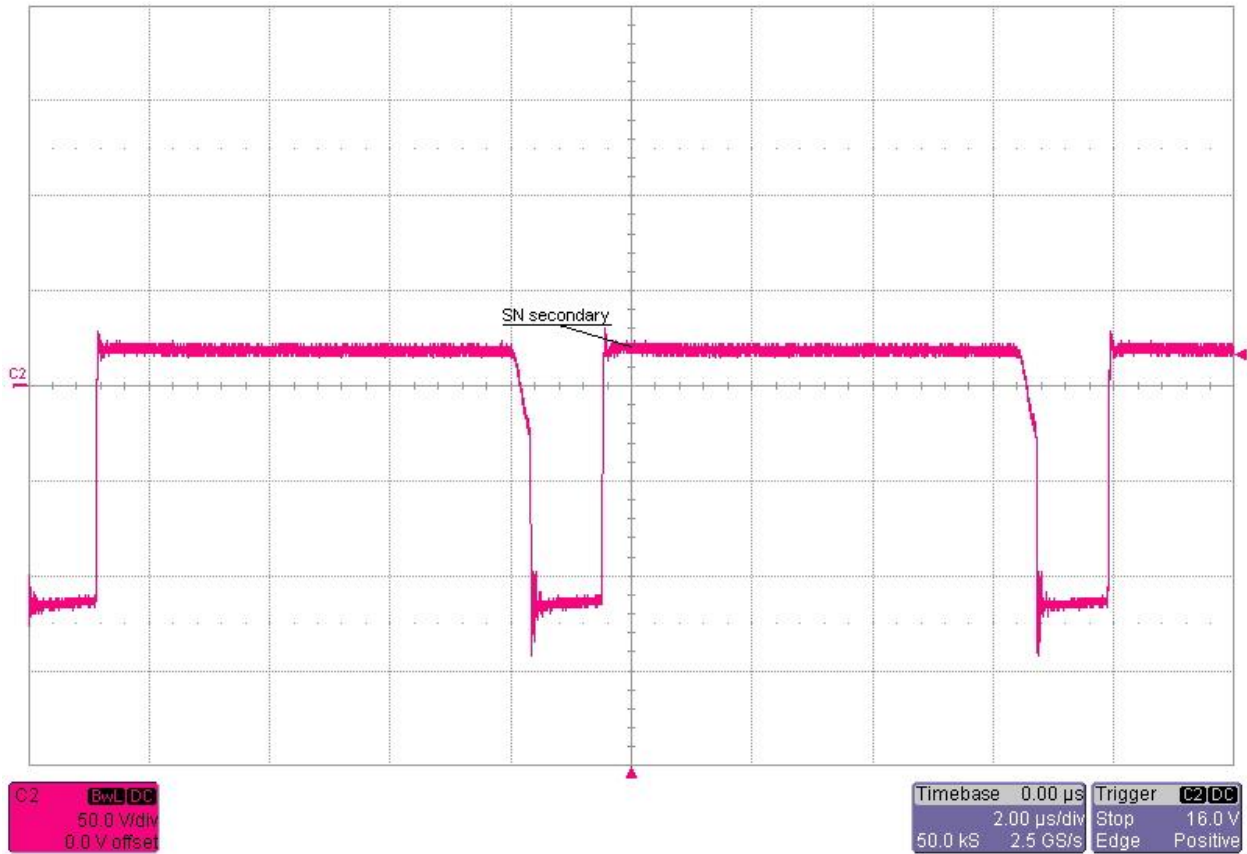
Load current = full load (3.84A)



## 6 Switch Node secondary side

Input voltage = 265VAC

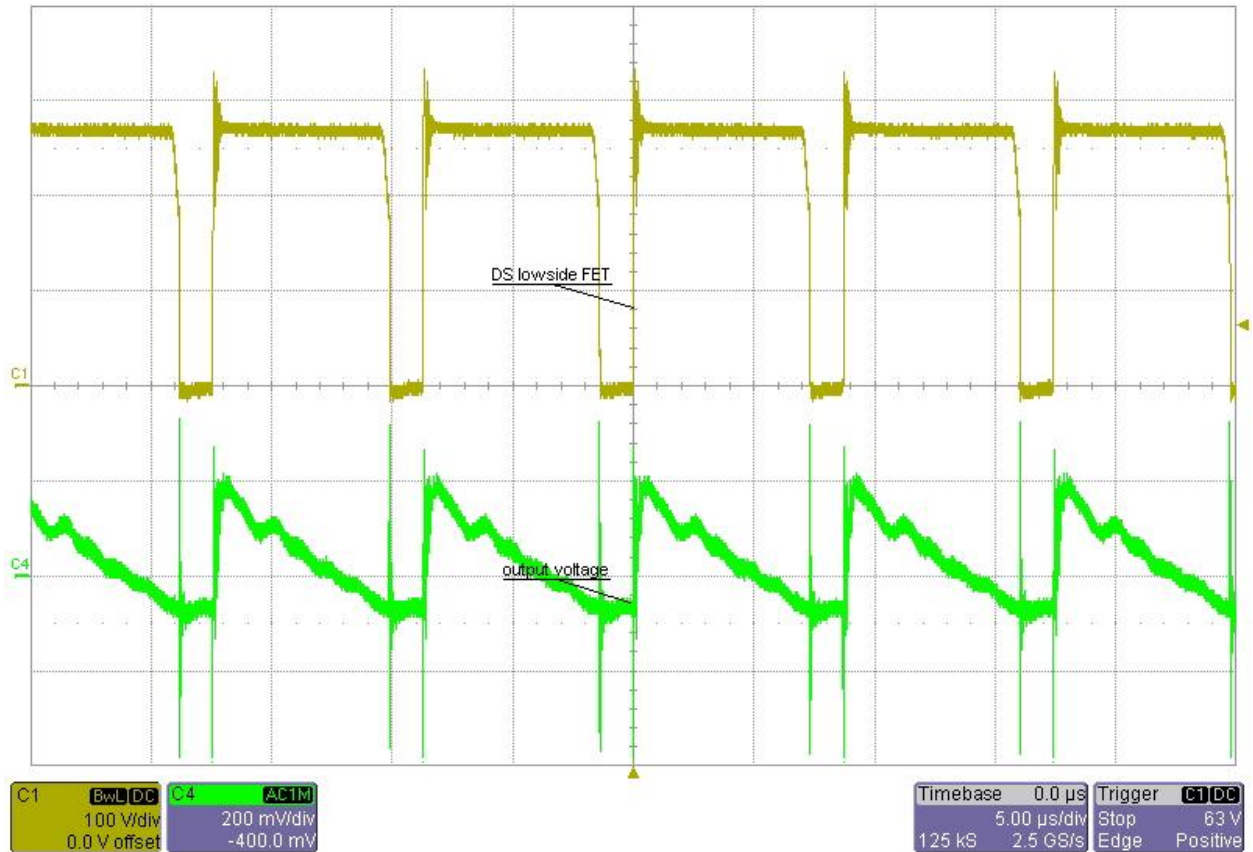
Load current = full load (3.84A)



## 7 Output ripple voltage

Input voltage = 230VAC

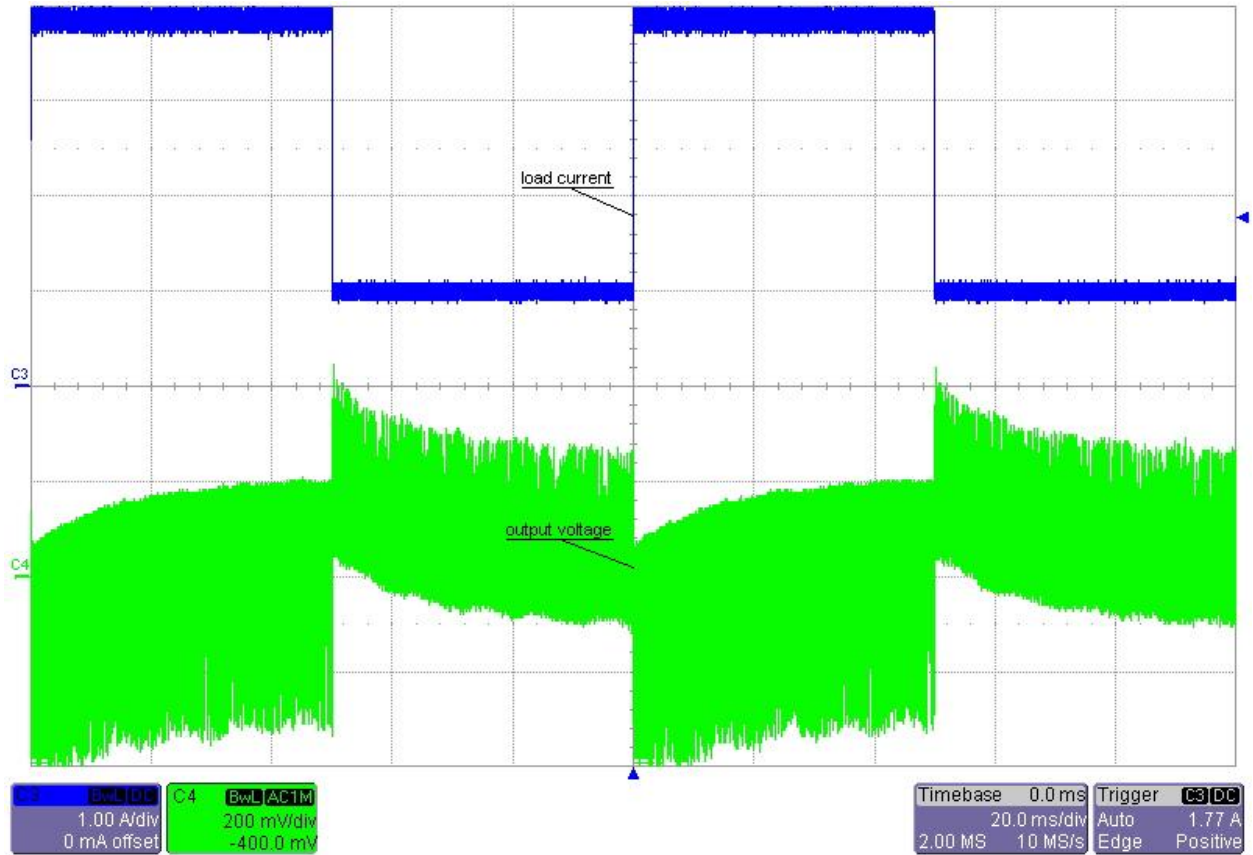
Load current = full load (3.84A)





## 8 Load Transients

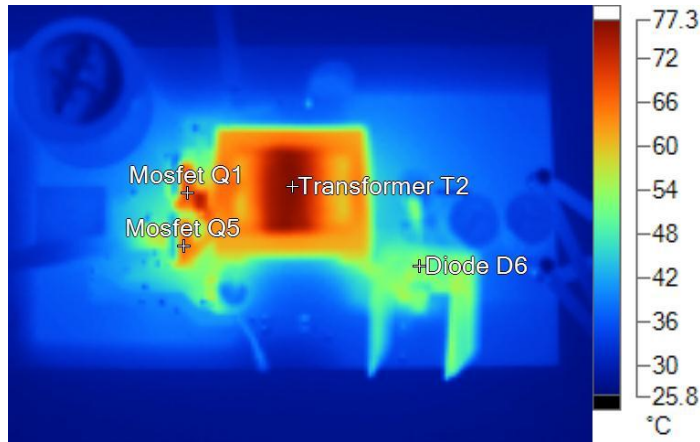
Input voltage = 230VAC  
Load current = 1A to 4A



## 9 Thermal Analysis

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

Input voltage = 325VDC  
 Output power = 75W  
 Ambient temperature = 25°C  
 No heatsink, no airflow



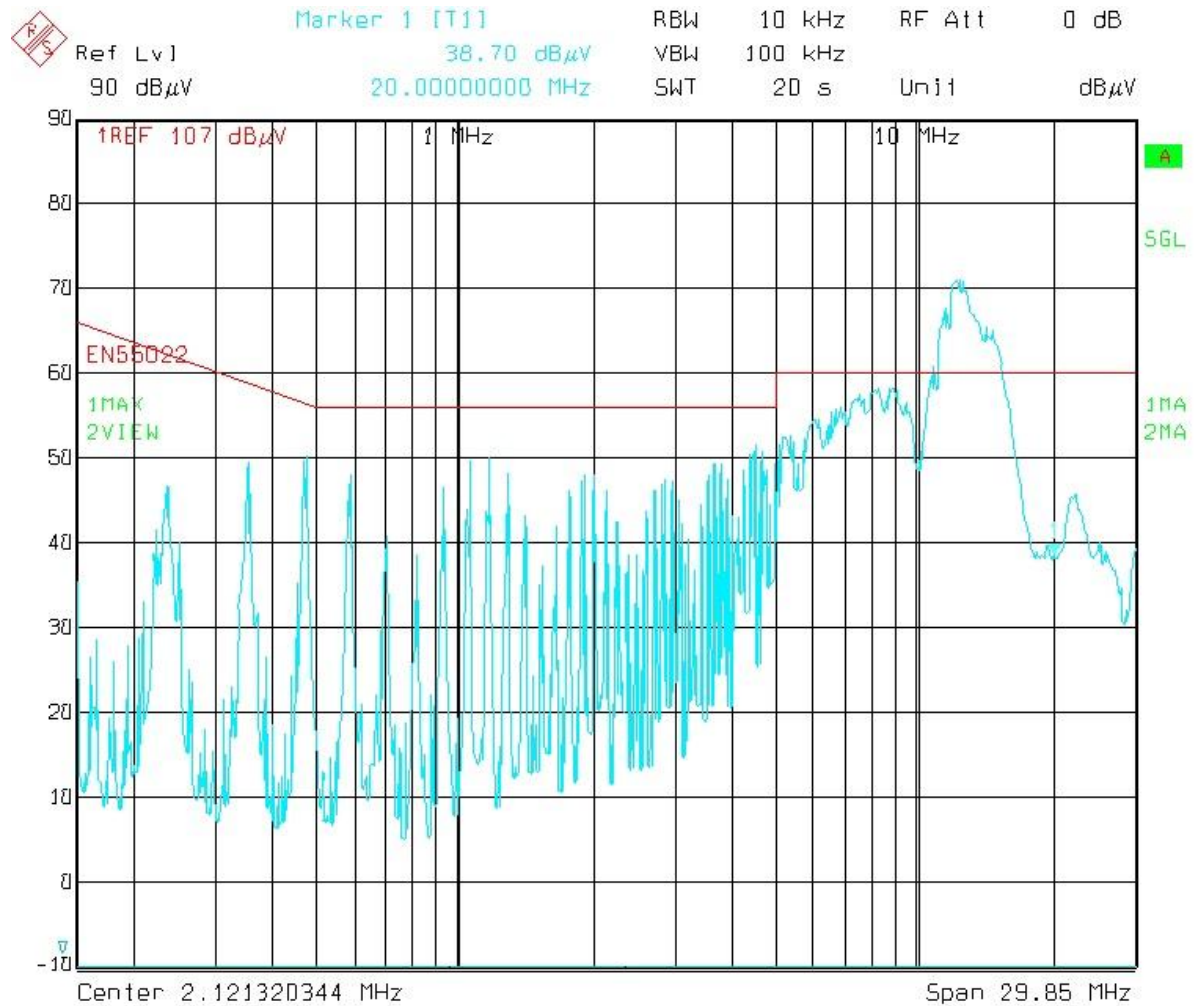
Name	Temperature
Transformer T2	77.1°C
Diode D6	53.6°C
Mosfet Q1	67.6°C
Mosfet Q5	65.9°C

IR20140918\_0500 325VDC I=3.84A.is2

### 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 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 = 265VAC  
 Load current = 3.84A

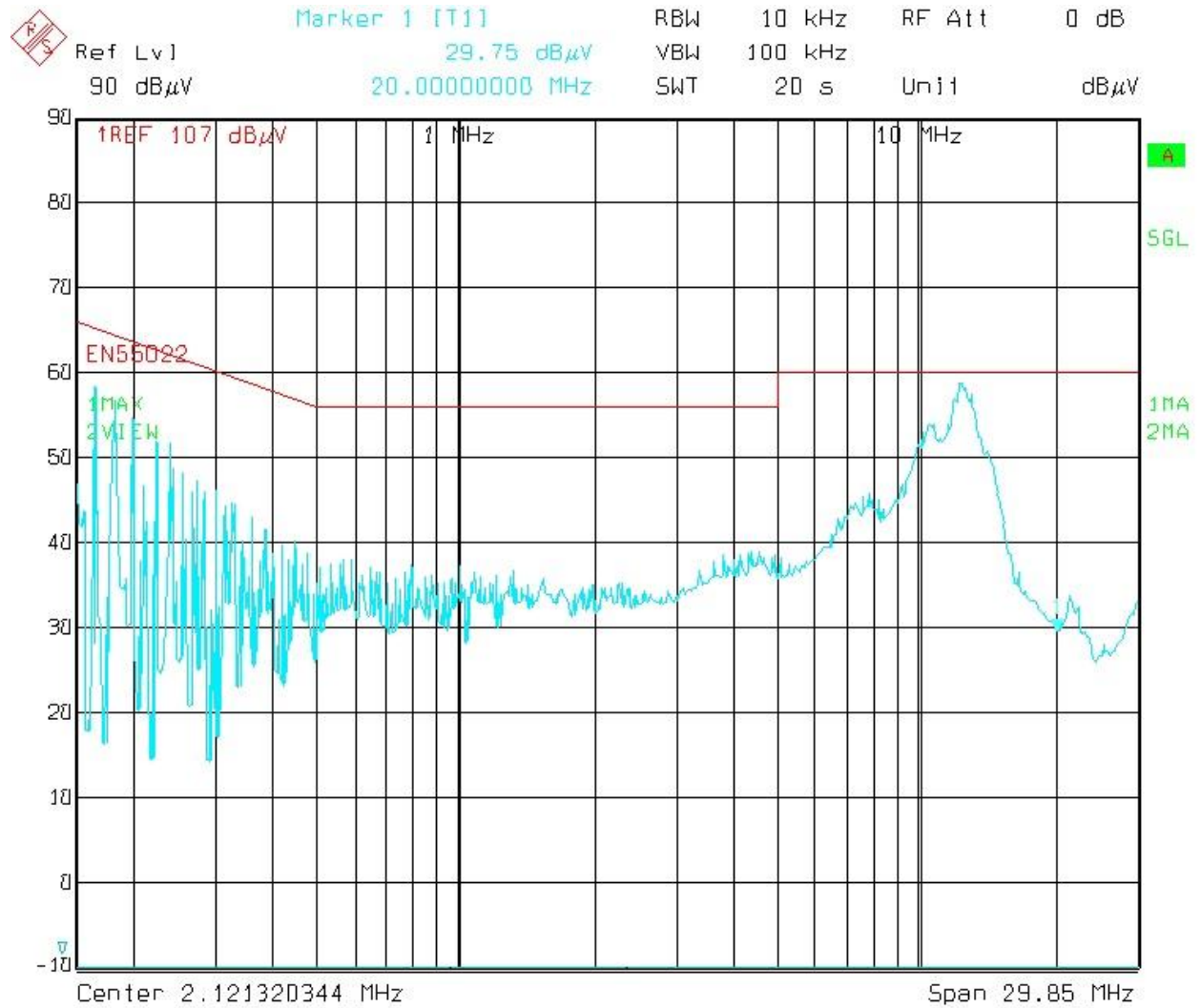


Date: 18.SEP.2014 15:34:31

# PMP10035\_RevC Test Results



Input voltage = 85VAC  
Load current = 3.84A



Date: 18.SEP.2014 15:24:35

## IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to TI's Terms of Sale (<https://www.ti.com/legal/termsofsale.html>) or other applicable terms available either on [ti.com](https://www.ti.com) or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265  
Copyright © 2021, Texas Instruments Incorporated