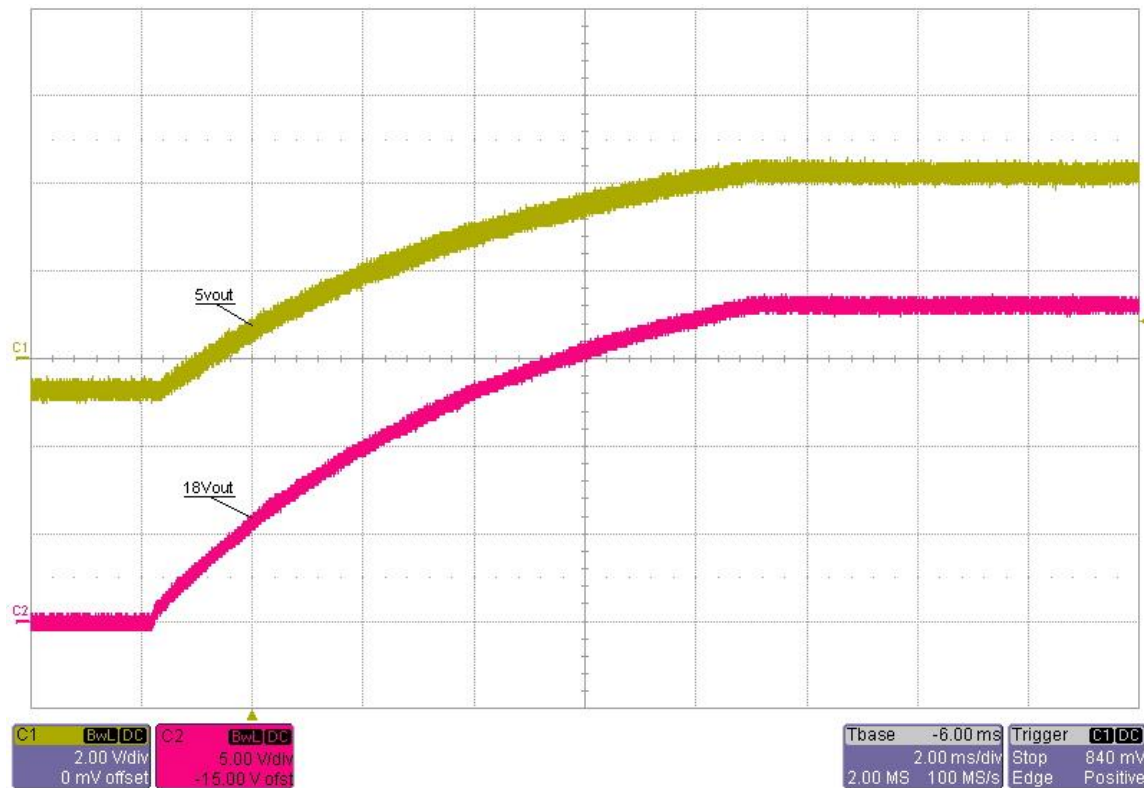


1 Startup

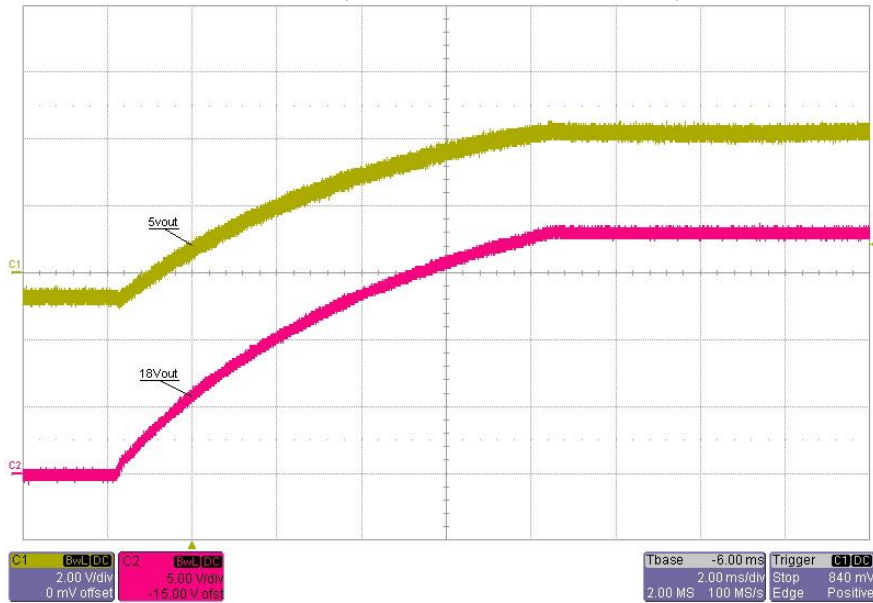
Input voltage = 100VAC

Load current = full load (5V@0.35A, 18V@0.35A)



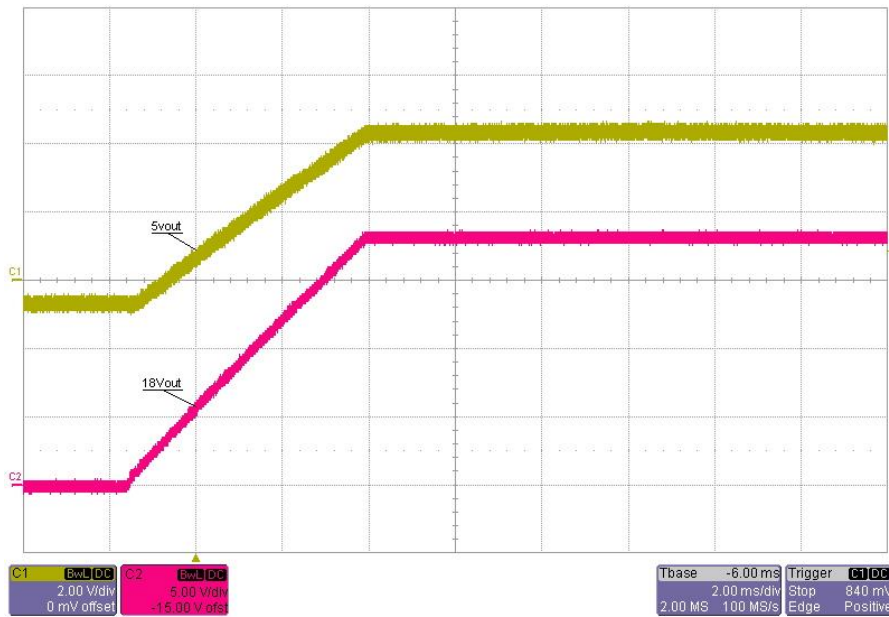
Input voltage = 254VAC

Load current = full load (5V@0.35A, 18V@0.35A)

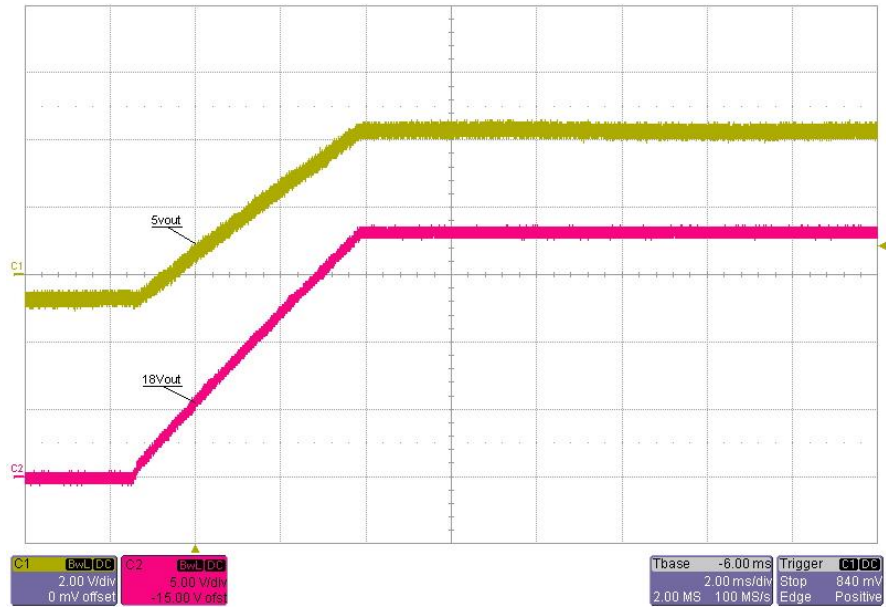


Input voltage = 100VAC

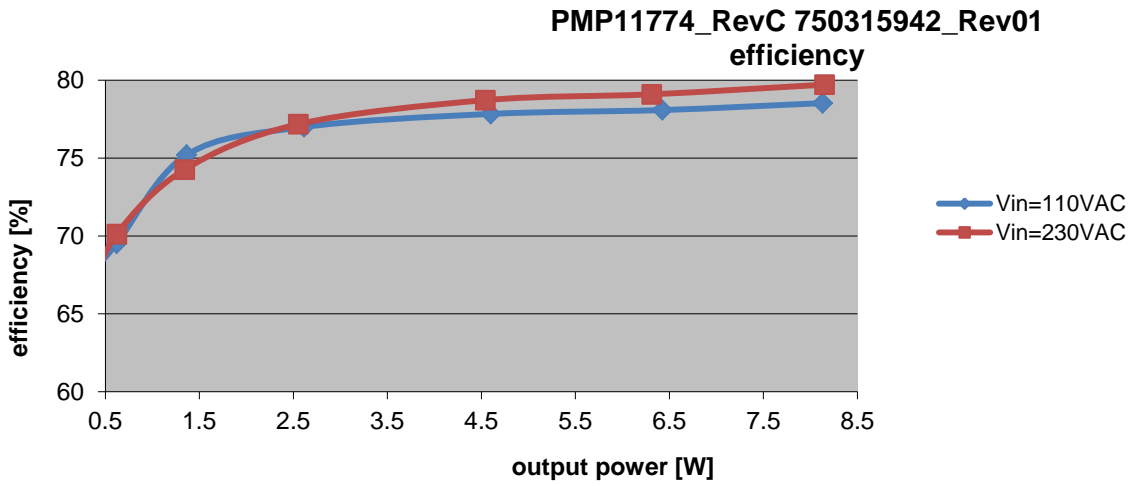
Load current = no load (5V@0A, 18V@0A)



Input voltage = 254VAC
Load current = no load (5V@0A, 18V@0A)



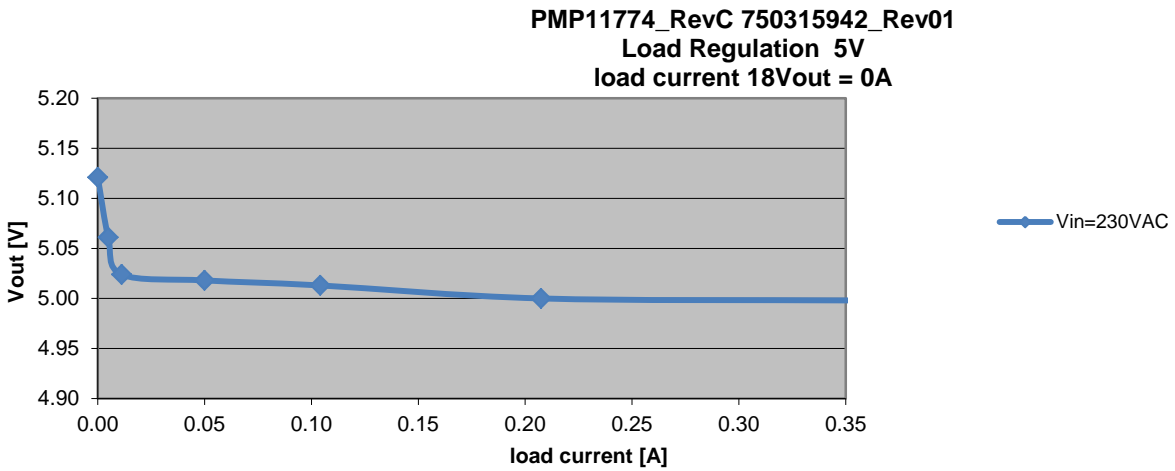
2 Efficiency



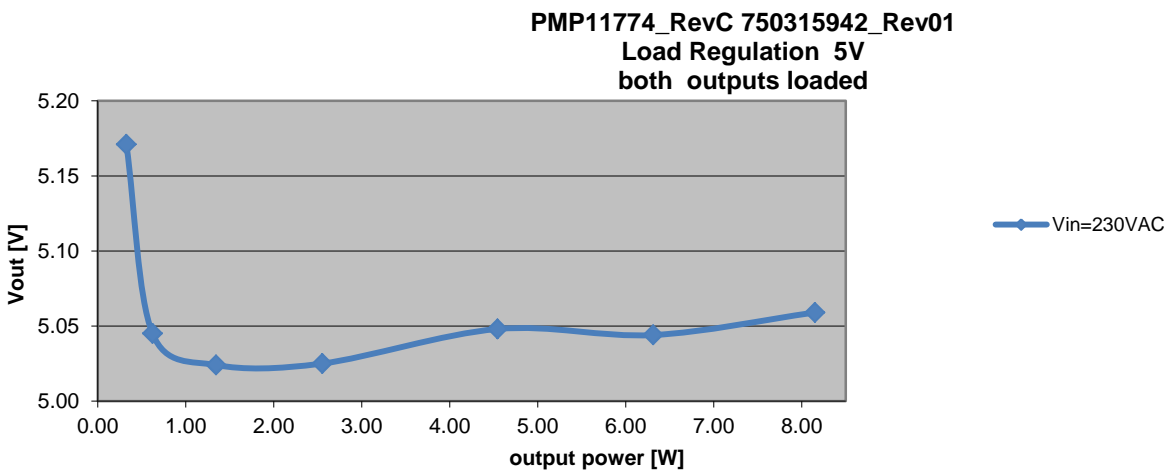
3 Load regulation

3.1 5V output

Input voltage = 230VAC
 Load 5V output = 0 – 350mA
 Load 18V output = no load

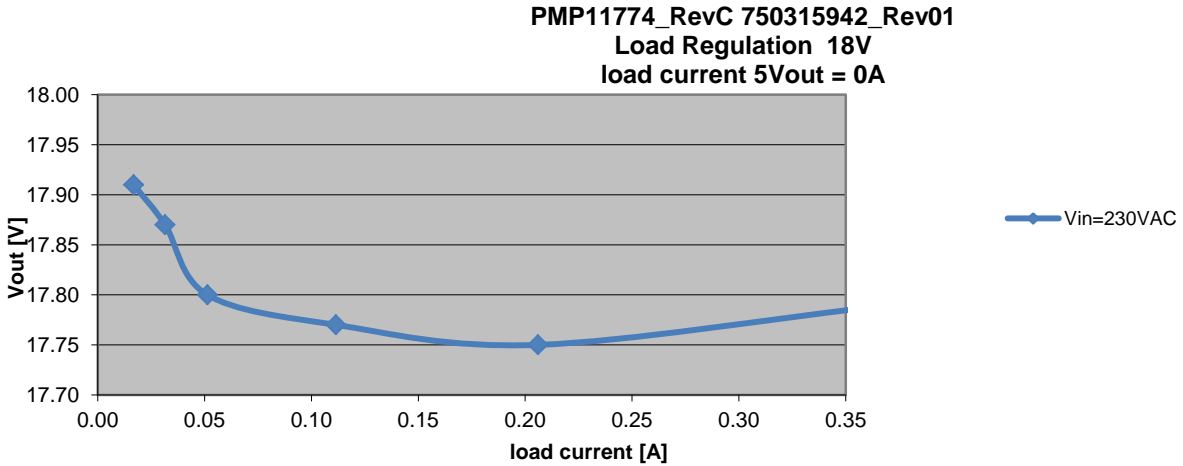


Input voltage = 230VAC
 Load 5V output = 5 – 350mA
 Load 18V output = 18 – 350mA

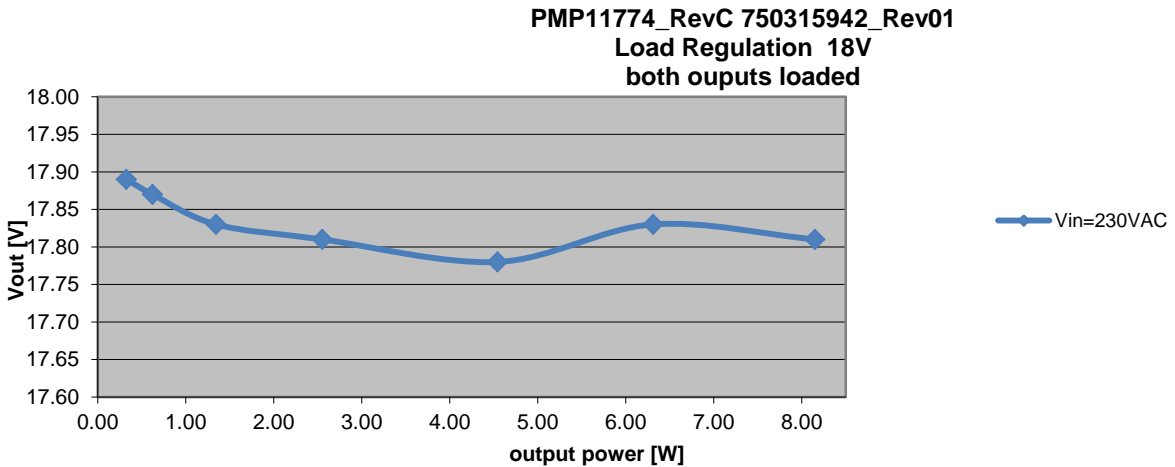


3.2 18V output

Input voltage = 230VAC
 Load 18V output = 18 – 350mA
 Load 5V output = no load



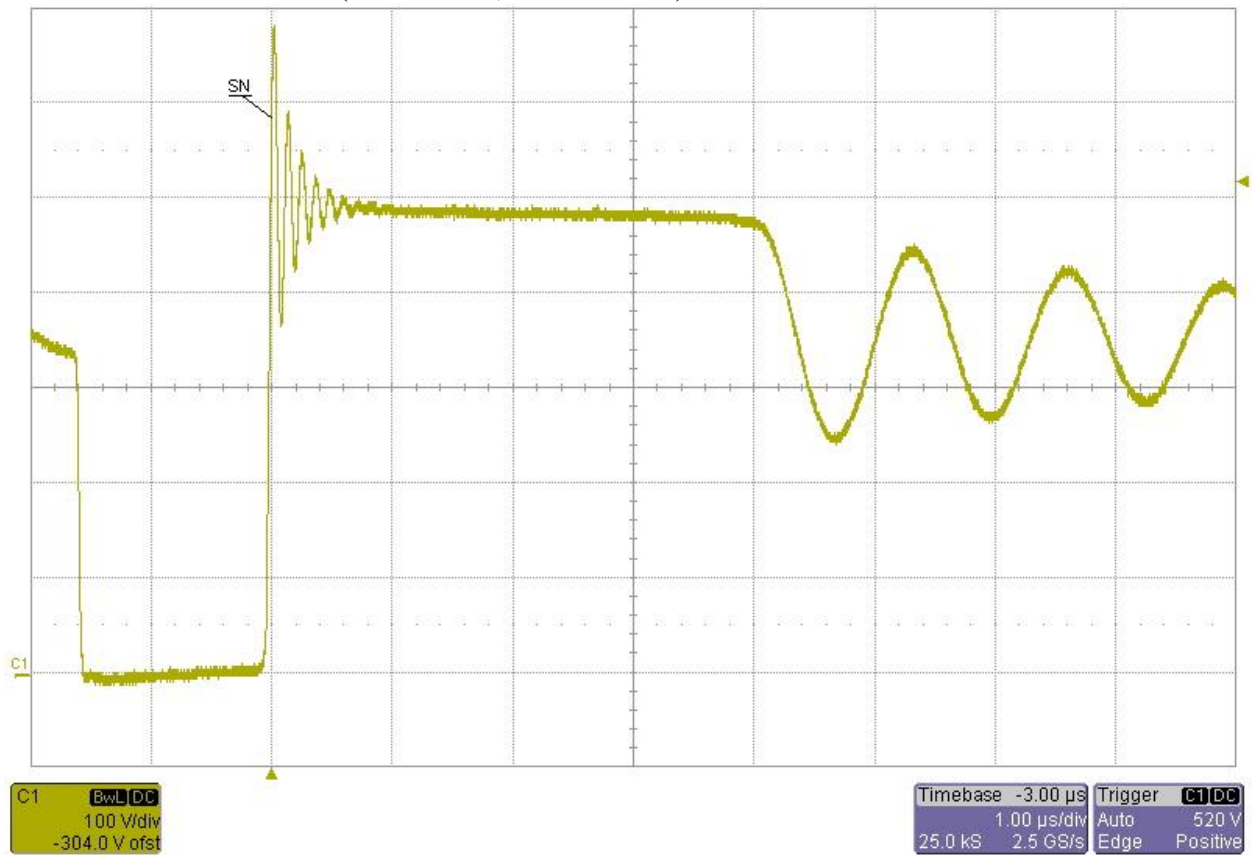
Input voltage = 230VAC
 Load 5V output = 5 – 350mA
 Load 18V output = 18 – 350mA



4 Switch Node

Input voltage = 360VDC

Load current = full load (5V@0.35A, 18V@0.35A)

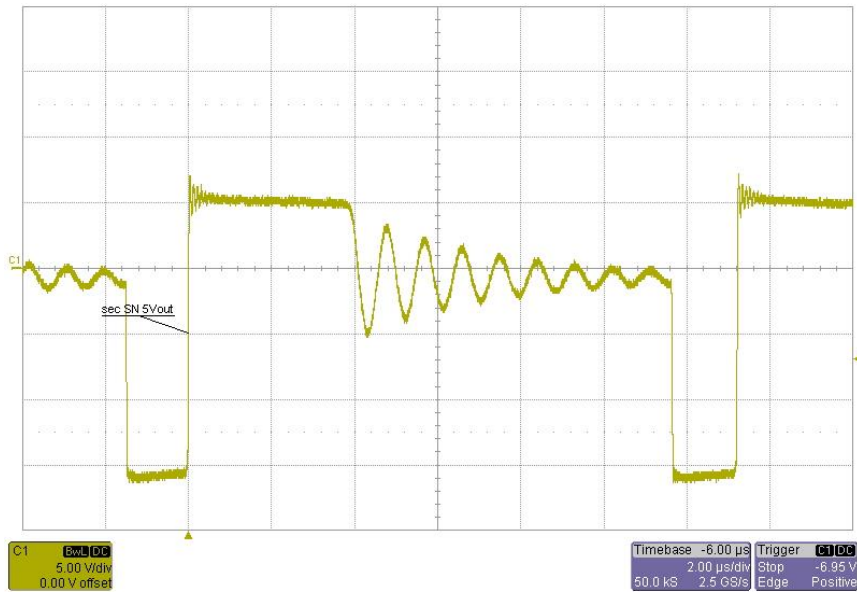


5 Secondary side Switch Node

5.1 5V output:

Input voltage = 360VDC

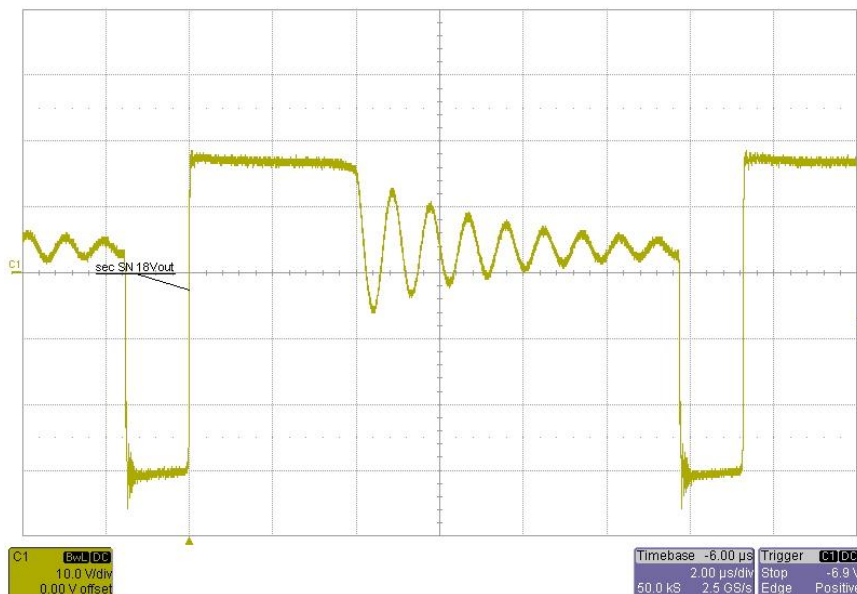
Load current = full load (5V@0.35A, 18V@0.35A)



5.2 18V output:

Input voltage = 360VDC

Load current = full load (5V@0.35A, 18V@0.35A)

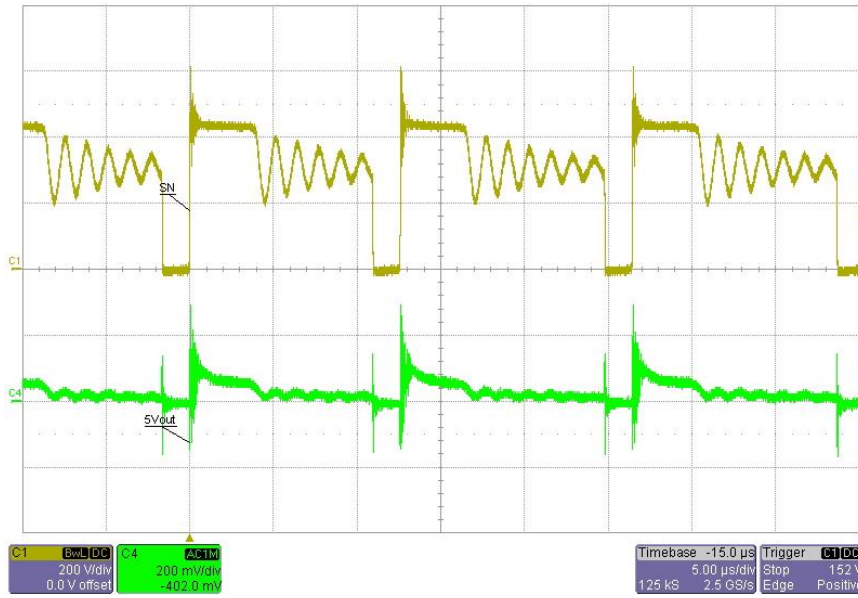


6 Output ripple voltage

6.1 5V output

Input voltage = 325VDC

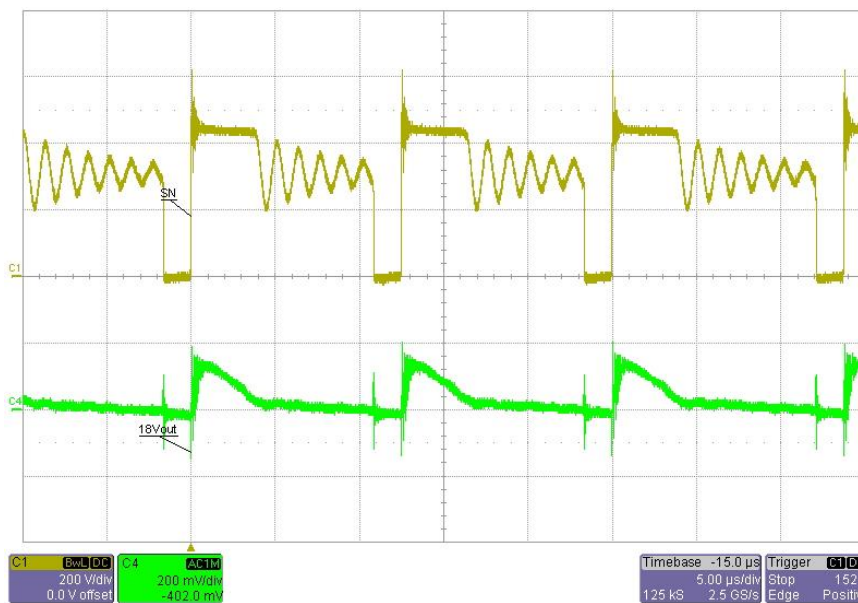
Load current = full load (5V@0.35A, 18V@0.35A)



6.2 18V output

Input voltage = 325VDC

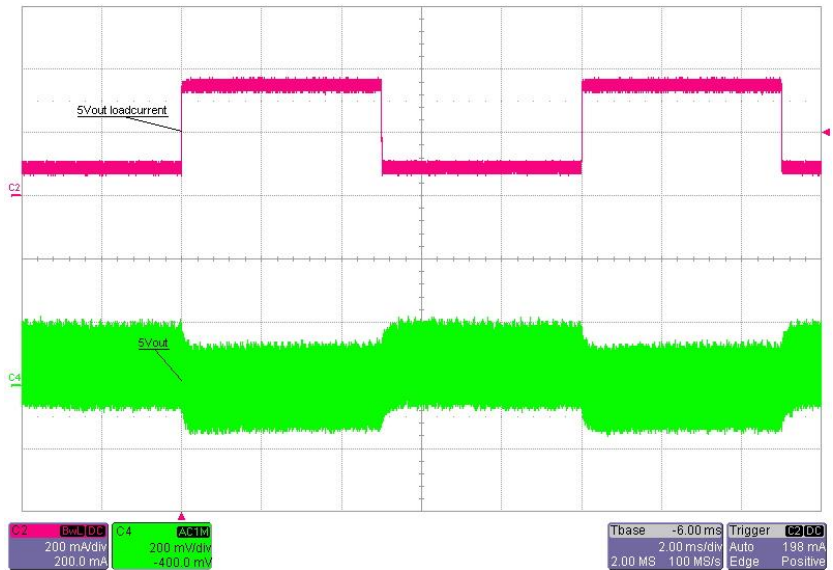
Load current = full load (5V@0.35A, 18V@0.35A)



7 Transient Response

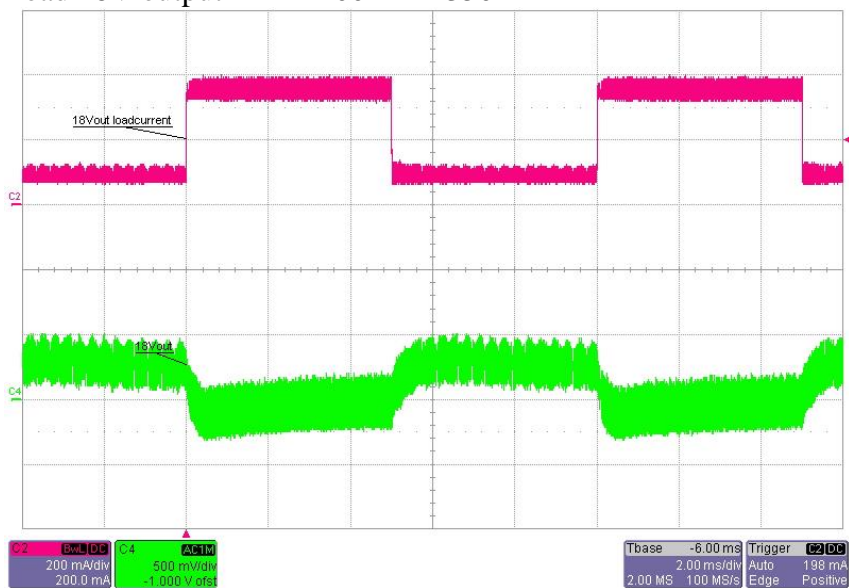
7.1 5V output

Input voltage = 325VDC
 Load 5V output = 100mA – 350mA
 Load 18V output = 350mA



7.2 18V output

Input voltage = 325VDC
 Load 5V output = 350mA
 Load 18V output = 100mA – 350mA



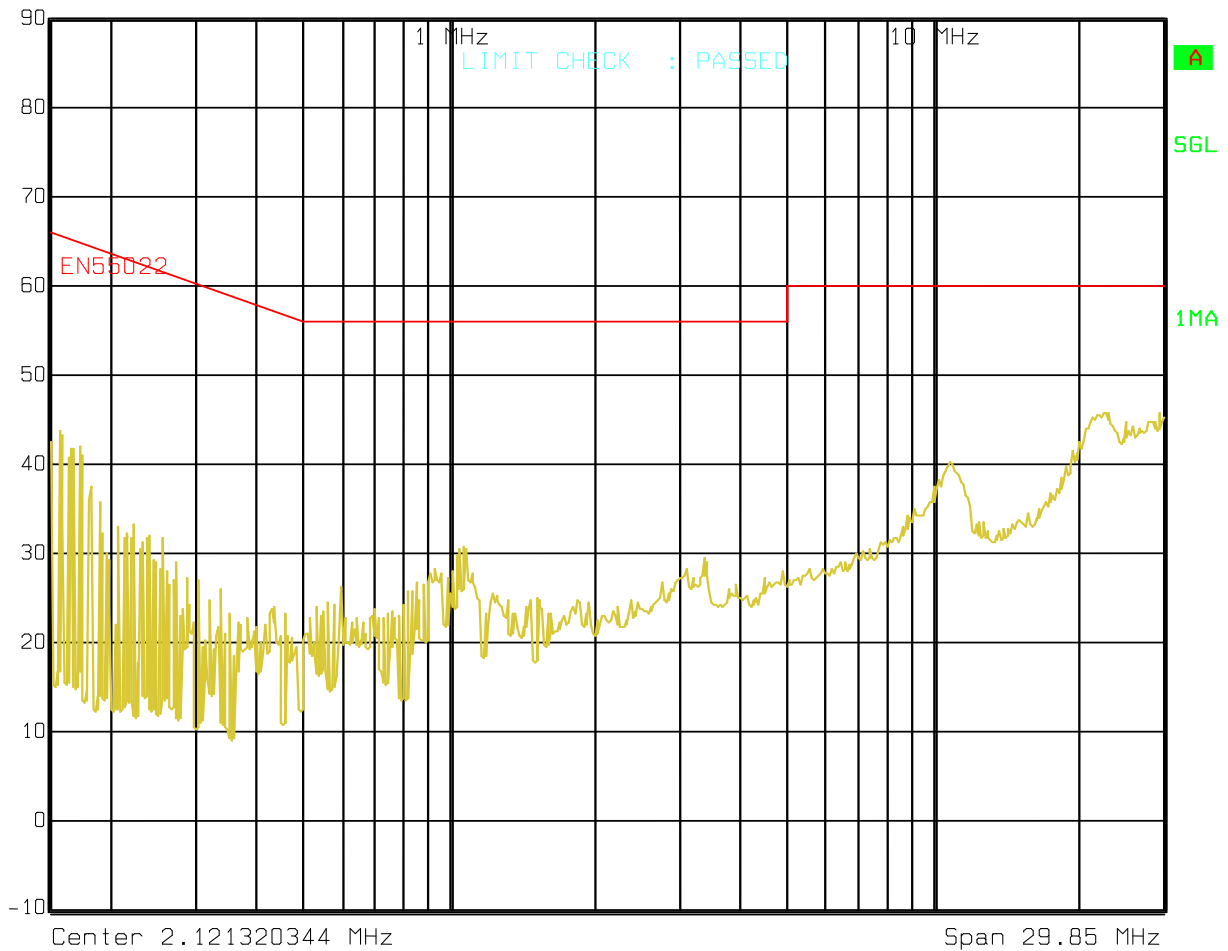
8 EMI Measurement

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 loads were two power resistors. The receiver was set to Quasi-peak detector, 10 KHz bandwidth.

Input voltage = 110VAC

Load current = full load (5V@0.35A, 18V@0.35A)

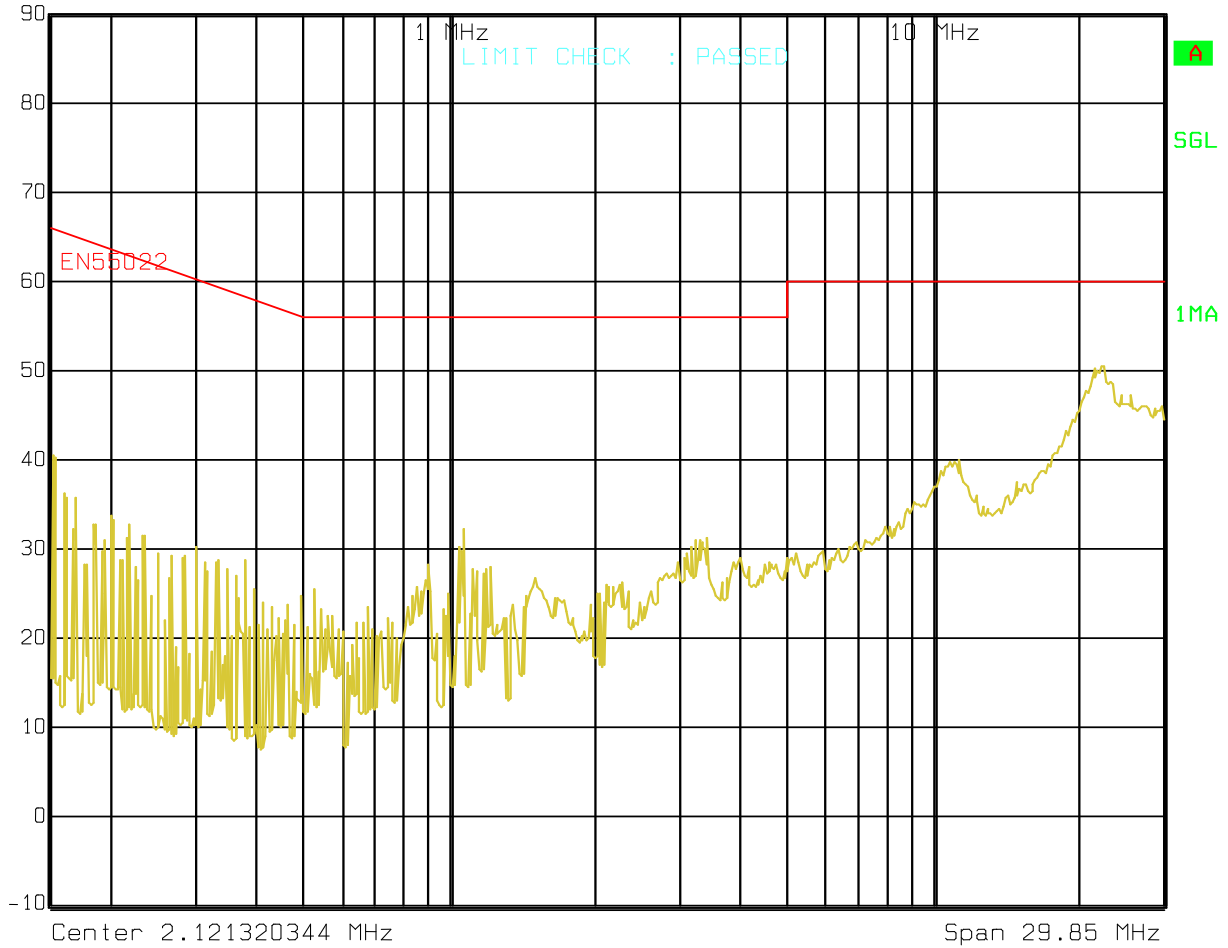
	Ref Lvl	RBW	10 kHz	RF Att	0 dB
	90 dB μ V	VBW	100 kHz	Unit	dB μ V
		SWT	36 s		



Date: 1.JAN.1997 1:39:41

Input voltage = 230VAC
Load current = full load (5V@0.35A, 18V@0.35A)

 Ref Lvl 90 dB μ V RBW 10 kHz RF Att 0 dB
VBW 100 kHz
SWT 36 s Unit dB μ V

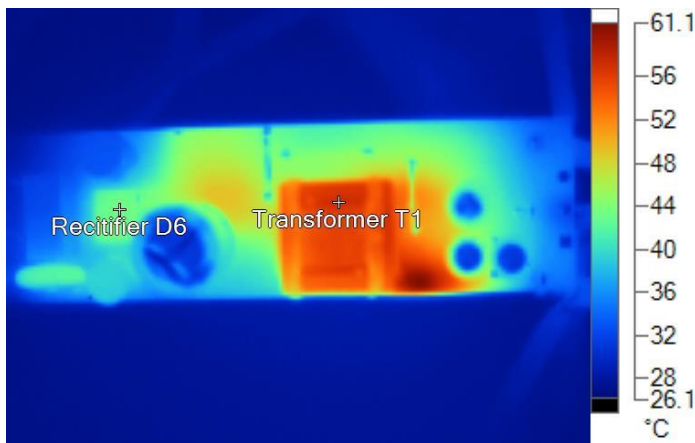


Date: 1.JAN.1997 1:41:00

9 Thermal Analysis

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

Input voltage = 100VAC
 Output power = 18V@0.35A, 5V@0.35A
 Ambient temperature = 25°C
 No heatsink, no airflow



IR20160119_0704 100VAC 60Hz full load top.is2

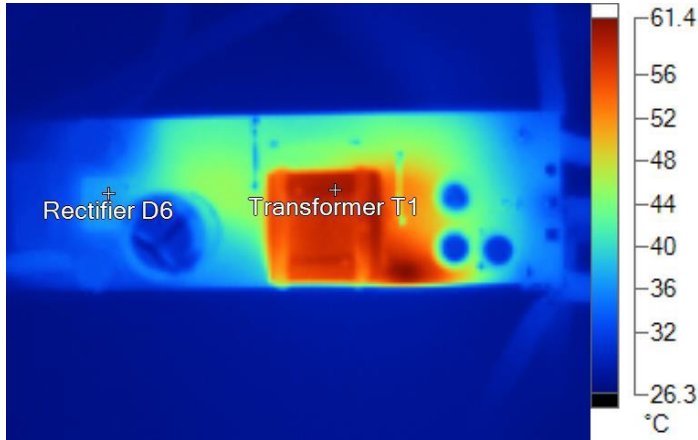
Name	Temperature
Rectifier D6	43.4°C
Transformer T1	57.4°C



IR20160119_0701 100VAC 60Hz full load bottom.is2

Name	Temperature
Controller U1	57.1°C
Diode D1	55.5°C
Diode D3	71.8°C

Input voltage = 254VAC
 Output power = 18V@0.35A, 5V@0.35A
 Ambient temperature = 25°C
 No heatsink, no airflow



Name	Temperature
Rectifier D6	37.1°C
Transformer T1	59.9°C

IR20160119_0703 254VAC 50Hz full load
 top.is2



Name	Temperature
Controller U1	53.1°C
Diode D1	57.6°C
Diode D3	74.8°C

IR20160119_0702 254VAC 50Hz full load
 bottom.is2

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