



PFC用扼流圈 动态特性数据

插针端子型

PFC QN系列

PFC3820QN

PFC3831QN

PFC用扼流圈

PFC QN系列

■特点

- PFC QN 系列实现了高功率和小占地面积。
- 额定输入电压对应AC220V。
- PFC输出功率对应800～900W。

■目录

型号	高度	PFC 输出功率	页
PFC3820QN-900K11B-00	50mm (小占地面积)	800W	3
PFC3831QN-351K08B-00	50mm (小占地面积)	900W	5
参考电路图		800 ～ 900W	7

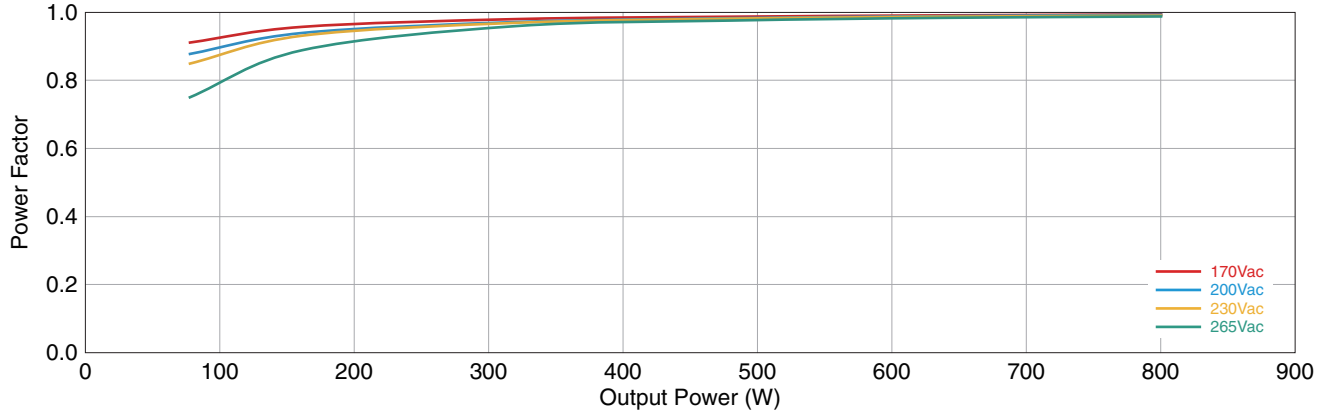
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PFC QN系列 **PFC3820QN-900K11B-00**

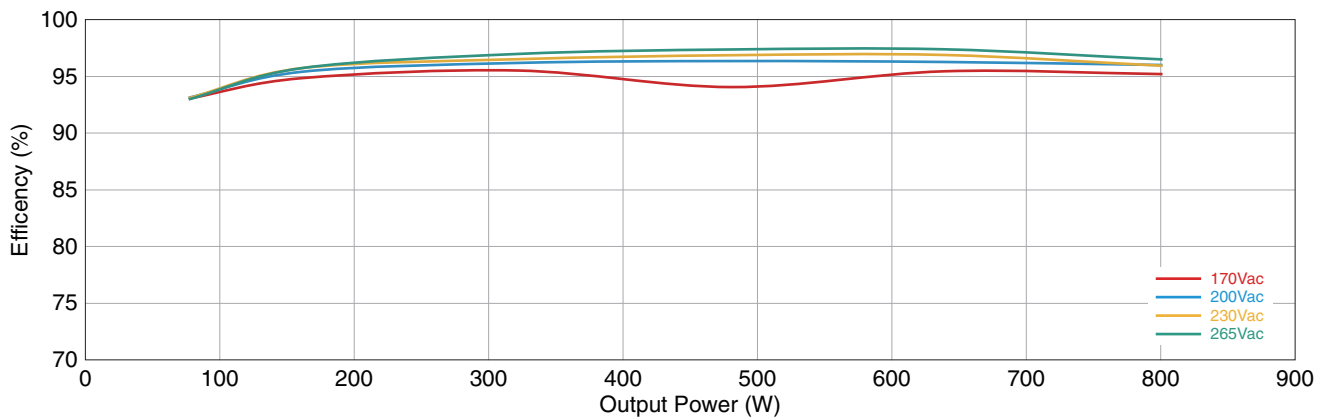
■ 参考动态特性

Vout = 378Vdc

□ Power Factor



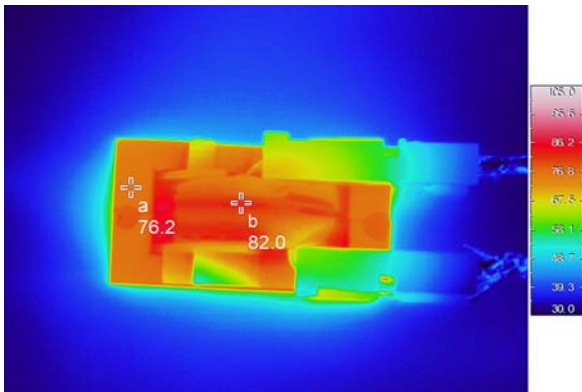
□ Efficiency



■ 参考温度

Vin = 170Vac, Vout = 378Vdc, Pout = 800W, Room Temp.

a : Core Surface, b : Coil Surface



注意：PFC 扼流圈的温度是在从板上浮动时测量的。

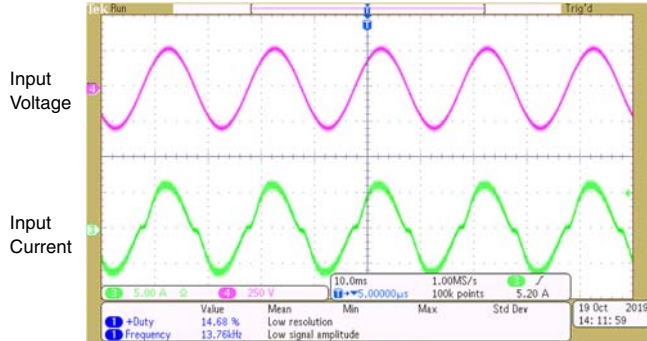
PFC QN系列 **PFC3820QN-900K11B-00**

■ 参考工作波形

□ Input Voltage / Current

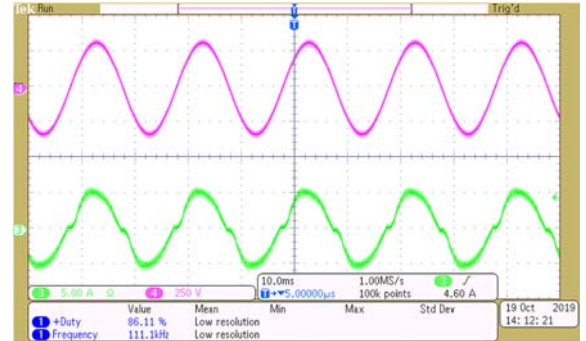
Vin=200Vac, Po=800W

5A/div 250V/div 10ms/div



Vin=230Vac, Po=800W

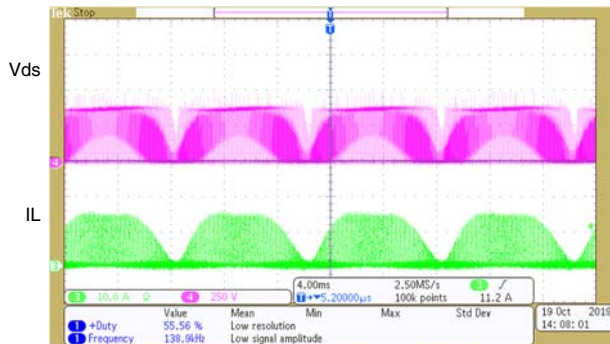
5A/div 250V/div 10ms/div



□ Vds / IL

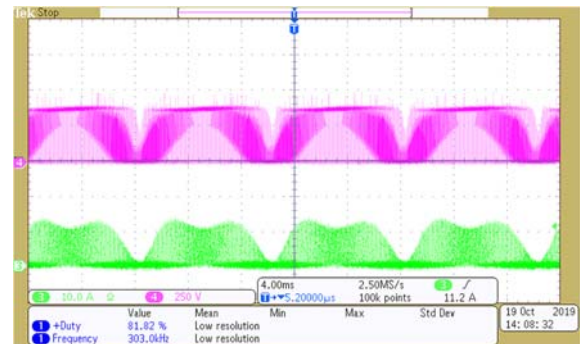
Vin=200Vac, Po=800W

10A/div 250V/div 4ms/div



Vin=230Vac, Po=800W

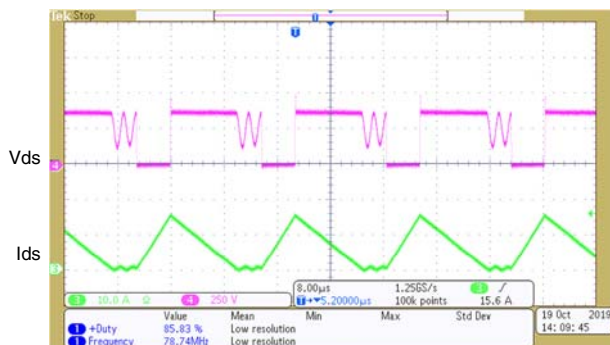
10A/div 250V/div 4ms/div



□ Vds / Ids

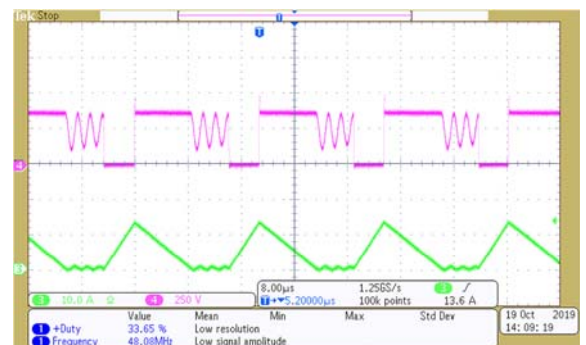
Vin=200Vac, Po=800W

10A/div 250V/div 8μs/div



Vin=230Vac, Po=800W

10A/div 250V/div 8μs/div

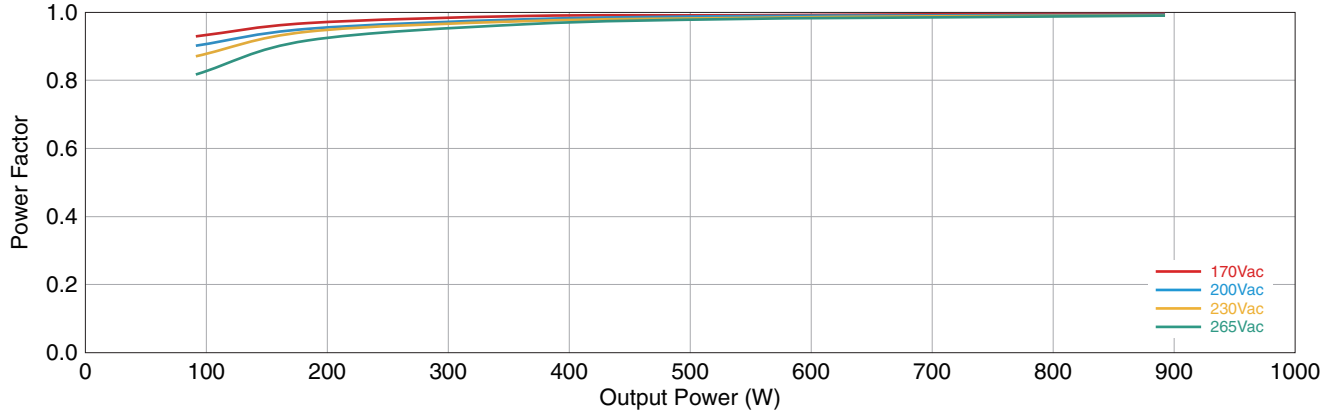


PFC QN系列 **PFC3831QN-351K08B-00**

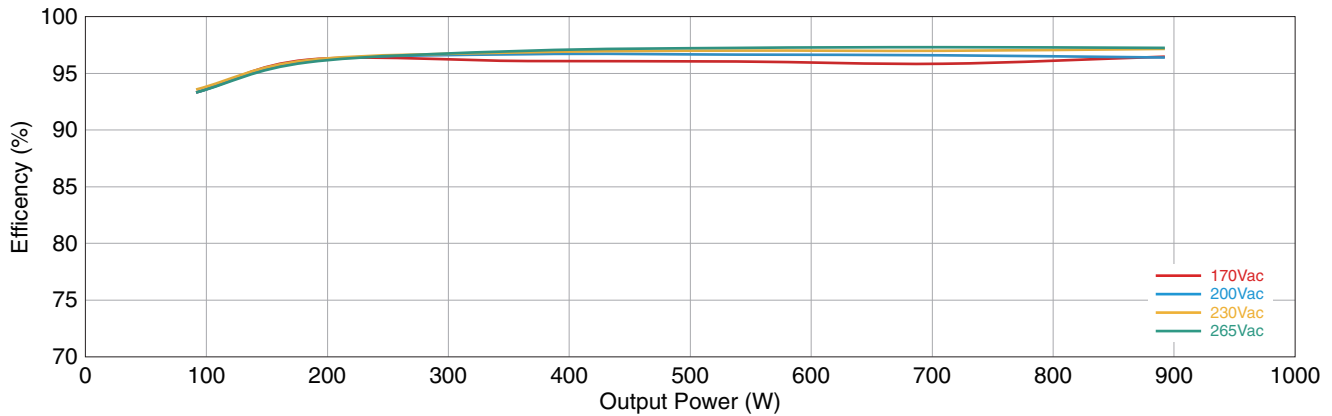
■ 参考动态特性

Vout = 377Vdc

□ Power Factor



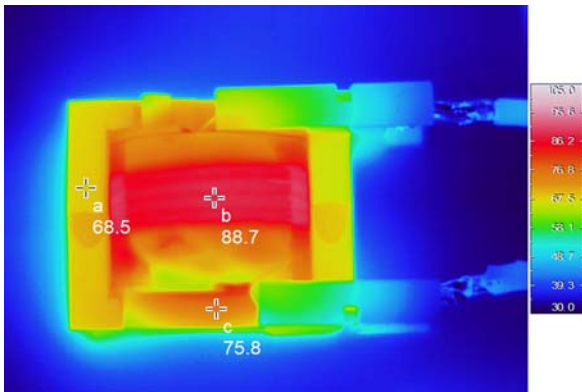
□ Efficiency



■ 参考温度

Vin = 170Vac, Vout = 377Vdc, Pout = 900W, Room Temp.

a, c : Core Surface, b : Coil Surface



注意：PFC 扼流圈的温度是在从板上浮动时测量的。

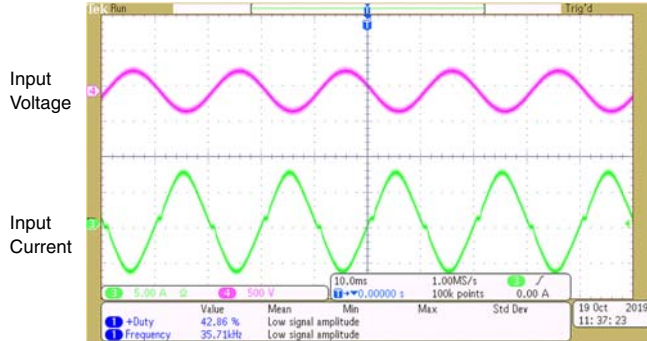
PFC QN系列 **PFC3831QN-351K08B-00**

■ 参考工作波形

□ Input Voltage / Current

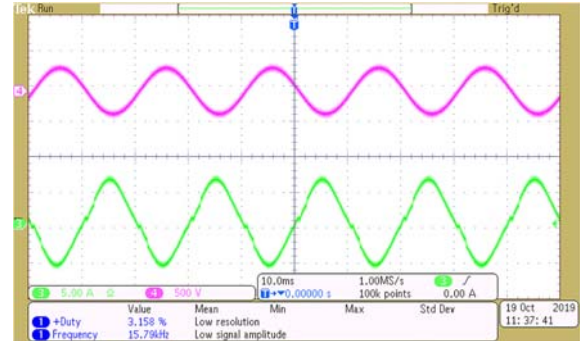
Vin=200Vac, Po=900W

5A/div 500V/div 10ms/div



Vin=230Vac, Po=900W

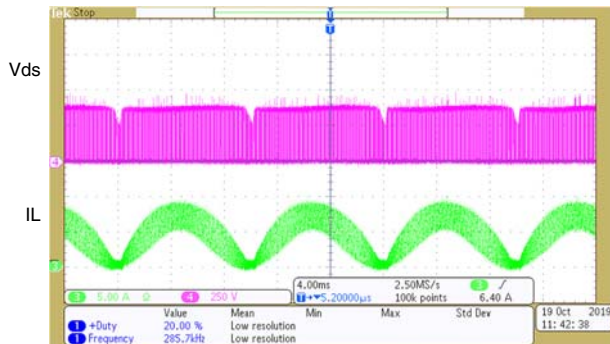
5A/div 500V/div 10ms/div



□ Vds / IL

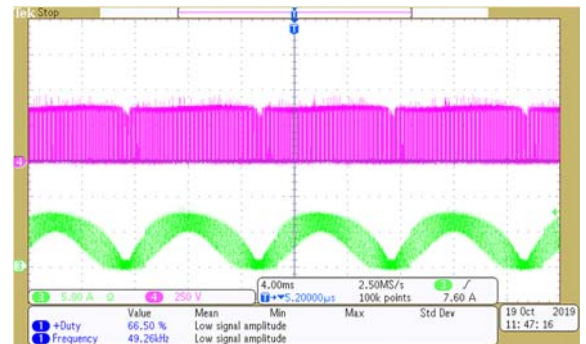
Vin=200Vac, Po=900W

5A/div 250V/div 4ms/div



Vin=230Vac, Po=900W

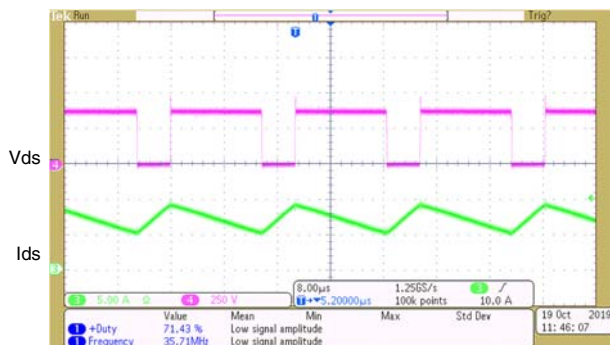
5A/div 250V/div 4ms/div



□ Vds / Ids

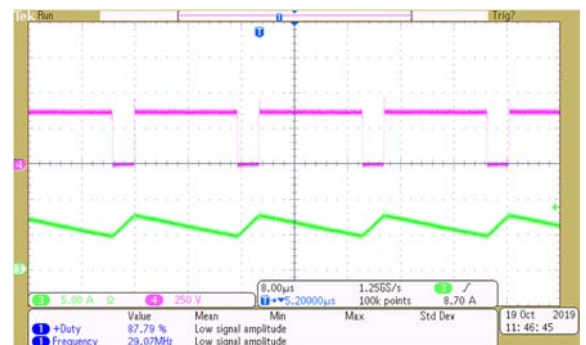
Vin=200Vac, Po=900W

5A/div 250V/div 8μs/div



Vin=230Vac, Po=900W

5A/div 250V/div 8μs/div



The diagram illustrates a 250W, 15A, 250V AC-DC converter with a PFC stage. The circuit is powered by a 250V, 15A, 250V AC source. The input is connected to a transformer with a 600uH inductor and a 310V, 1uF capacitor. The secondary side of the transformer is connected to a bridge rectifier. The output of the rectifier is connected to a PFC stage, which includes an inductor (100uH) and a MOSFET (SF16J251). The PFC stage is controlled by a 250V, 15A, 250V AC source. The output of the PFC stage is connected to a full-bridge inverter stage, which includes two MOSFETs (2SK2372) and an IGBT (FA5502N). The inverter stage is controlled by a 250V, 15A, 250V AC source. The output of the inverter stage is connected to a 450V, 250uF capacitor. The diagram is labeled with various components and their values.

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