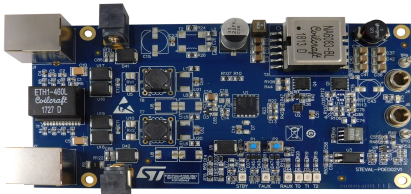


## Power over Ethernet - PD converter with 5 V 8 A output, synchronous Flyback, IEEE802.3bt standard compliant



### Features

- Based on [PM8804](#) and [PM8805](#)
- IEEE 802.3bt compliant PD interface
- Works with power supplied from Ethernet LAN cables or local auxiliary sources
- Line input voltage range: 40 to 60 V<sub>DC</sub>
- Output voltage: 5 V<sub>DC</sub> ± 2.5%
- Output current: 8 A
- Peak-to-peak output ripple: < 50 mV
- DC-DC full load efficiency: > 91%
- Overall full load efficiency: > 90%
- Transient response ΔV pk-pk 100% to 50% load step ≈ 700mV
- Switching frequency ≈ 280 KHz

### Description

The [STEVAL-POE002V1](#) power device evaluation board is equipped with a DC-DC converter stage, managed by the [PM8804](#) controller, which provides 40 W (5 V-8 A) on the output.

The DC-DC converter stage is based on the fixed frequency Flyback topology with a secondary synchronous rectification managed by the controller via gate driver transformer.

The evaluation board embeds also the [PM8805](#) controller, dedicated to the Ethernet interface (compliant with the Standard IEEE802.3.af/at/bt) and to the full active bridge rectification.

Product summary	
Power over Ethernet-PD converter based on PM8804 and PM8805	<a href="#">STEVAL-POE002V1</a>
PWM peak current mode controller for PoE and telecom systems	<a href="#">PM8804</a>
IEEE802.3bt PoE-PD interface with integrated dual-active bridge	<a href="#">PM8805</a>

# 1 STEVAL-POE002V1 schematic diagrams

Figure 1. STEVAL-POE002V1 circuit schematic (1 of 4)

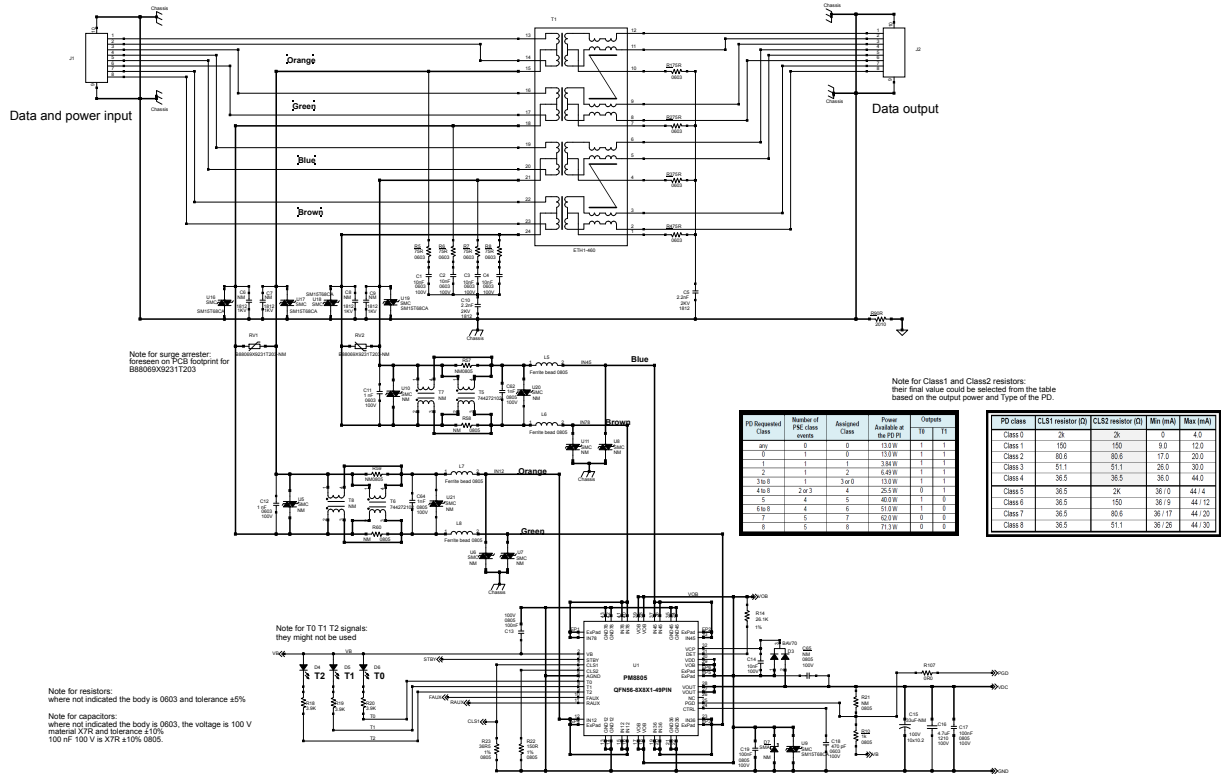


Figure 2. STEVAL-POE002V1 circuit schematic (2 of 4)

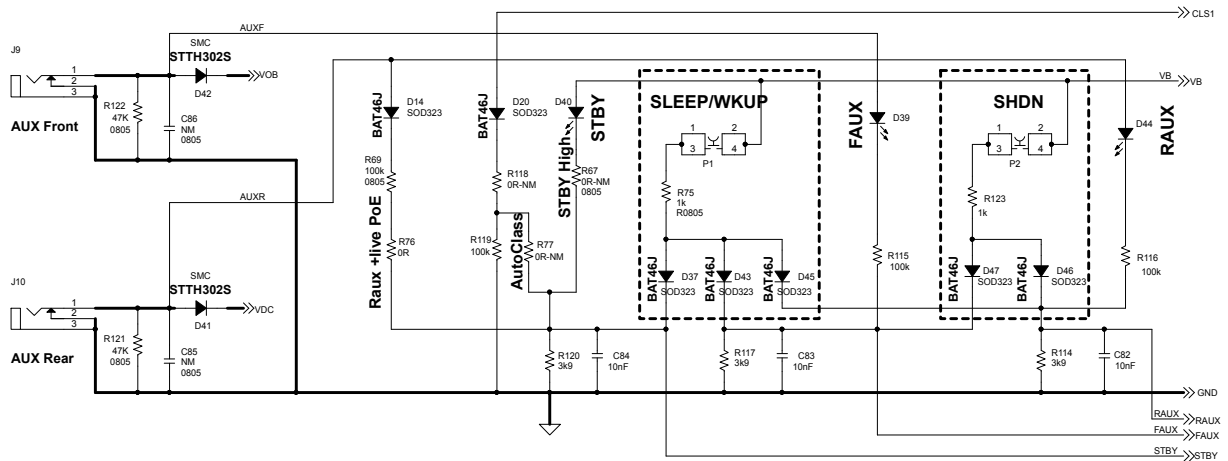


Figure 3. STEVAL-POE002V1 circuit schematic (3 of 4)

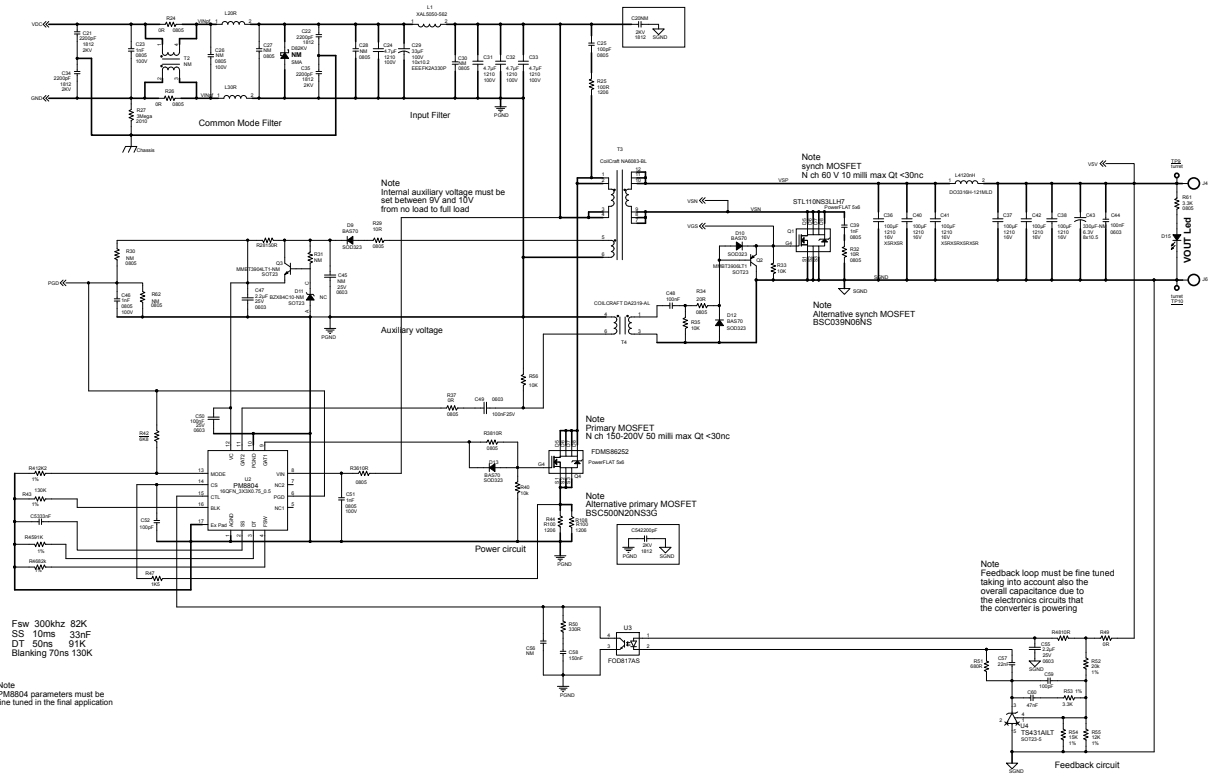
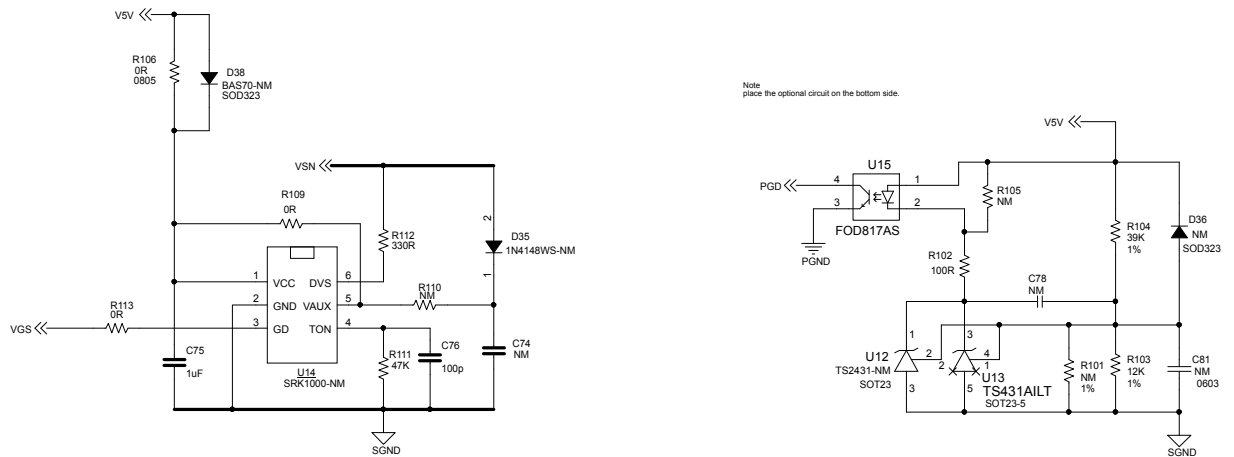


Figure 4. STEVAL-POE002V1 circuit schematic (4 of 4)



## Revision history

**Table 1. Document revision history**

Date	Version	Changes
16-Oct-2018	1	Initial release.

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