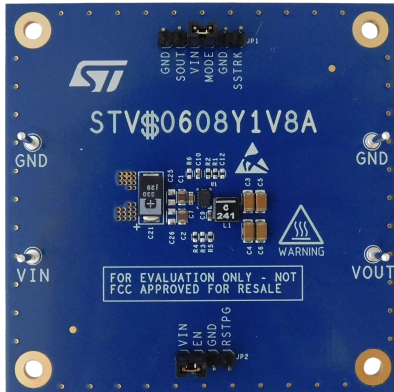


1.8 V / 8 A automotive step down DC/DC converter (VIN up to 6 V) based on the DCP0608Y



Features

- 5 V (up to 6 V) operating input voltage
- Step-down (buck) conversion
- 1.8 V programmed output voltage
- 8 A DC max. output current
- 2.25 MHz selected switching frequency with dithering
- 3 ms programmed soft-start
- Dynamic low consumption mode to low noise mode selection
- Synchronization to external clock
- Internal compensation network
- Auto recovery overcurrent, overvoltage, and thermal protection
- RoHS and China RoHS compliant
- WEEE compliant (2012/19/UE RAEE II)

Description

Product summary	
1.8 V / 8 A automotive step down DC/DC converter (VIN up to 6 V) based on the DCP0608Y	STEVAL-0608Y1V8
QFN 2x3 11 Leads	DCP0608QTRY
Applications	DC-DC converters

The **STEVAL-0608Y1V8** product evaluation board is a step-down switching power supply based on the **DCP0608Y** regulator in a QFN11 2x3 mm package.

The programmed switching frequency is 2.25 MHz with dithering and it can be adjusted by applying an external clock on MODE/SIN pin or by changing the frequency programming resistor.

The **DCP0608Y** is a high efficiency monolithic step-down synchronous switching regulator designed to deliver up to 8 A continuous current.

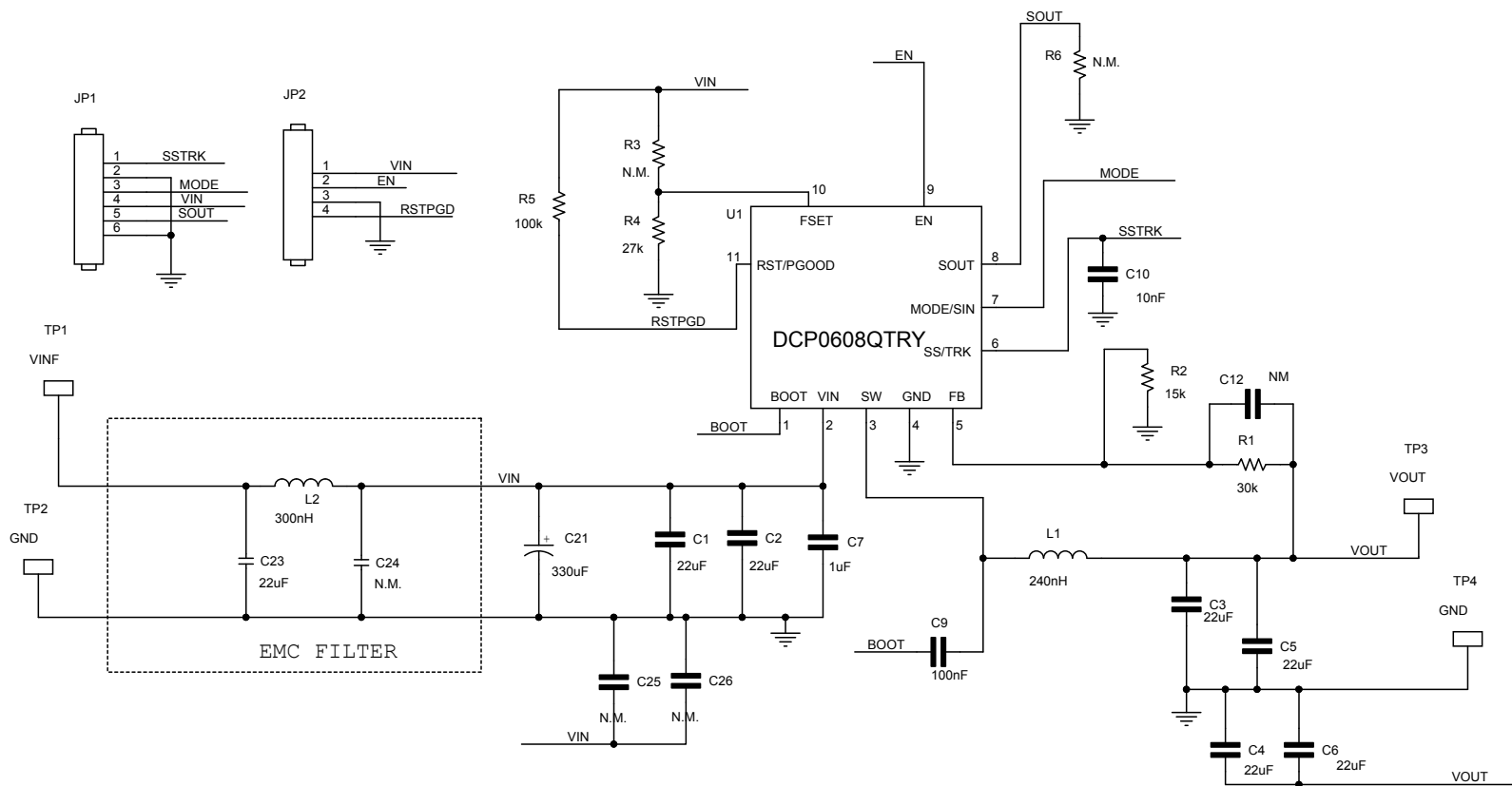
The IC operates from 2.9 to 6 V input voltage. The **DCP0608Y** features low-resistance integrated N-channel MOSFETs and diode emulation working mode for optimum efficiency over all the loading range.

The integrated 0.6 V reference allows the regulation of output voltages with $\pm 1.5\%$ accuracy over temperature variations.

The switching frequency is externally adjustable between 1.8 and 4 MHz. The soft-start duration can be adjusted with an external capacitor or the same SS/TRK pin can be used for output voltage sequencing while the RST/PGOOD pin provides real-time information on the output voltage.

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Figure 1. STEVAL-0608Y1V8 circuit schematic



2 Board versions

Table 1. STEVAL-0608Y1V8 versions

Finished good	Schematic diagrams	Bill of materials
STV\$0608Y1V8A ⁽¹⁾	STV\$0608Y1V8A schematic diagrams	STV\$0608Y1V8A bill of materials

1. This code identifies the STEVAL-0608Y1V8 evaluation board first version.

Revision history

Table 2. Document revision history

Date	Revision	Changes
30-Jun-2026	1	Initial release.

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