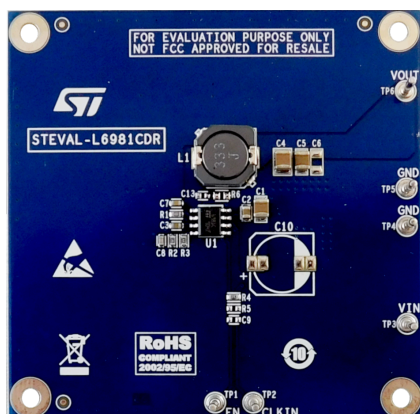


## 38 V, 1.5 A synchronous step-down switching regulator evaluation board based on the L6981CDR



### Features

- 3.5 V to 38 V operating input voltage
- Output voltage from 0.85 V to VIN
- 1.5 A DC output current
- Internal compensation network
- Two different versions: LCM for high efficiency at light loads and LNM for noise sensitive applications
- 2  $\mu$ A shutdown current
- Internal soft-start
- Enable function
- Overvoltage protection
- Output voltage sequencing
- Thermal protection
- SO 8L package
- Synchronization with external clock for LNM devices

### Description

The **STEVAL-L6981CDR** evaluation board is based on the **L6981CDR** synchronous monolithic step-down regulator capable of delivering up to 1.5 A DC.

Its wide input voltage range makes the device suitable for a broad range of applications.

The device implements peak current mode architecture in an SO 8L package with internal compensation to minimize design complexity and size.

The **L6981** is available in low consumption mode (LCM) and low noise mode (LNM) versions.

LCM maximizes efficiency at light load with controlled output voltage ripple, making the device extremely suitable for battery-powered applications.

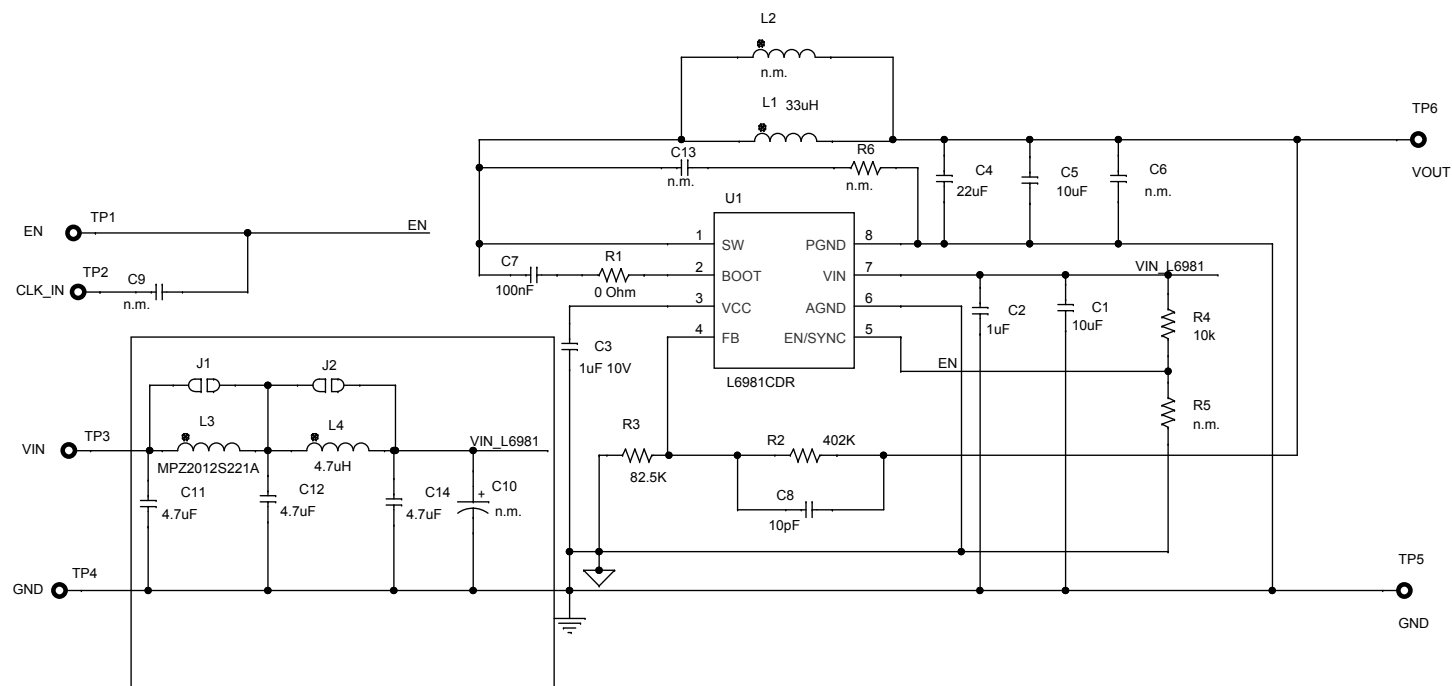
LNM makes the switching frequency constant and minimizes the output voltage ripple overload current range, meeting the specification for noise sensitive applications.

The EN pin manages the enable/disable function. The typical shutdown current is 2  $\mu$ A when disabled. When the EN pin is pulled up, the device is enabled and the internal 1.3 ms soft-start takes place.

Pulse-by-pulse current sensing on both power elements implements effective constant current protection while thermal shutdown prevents thermal run-away.

Product summary	
38 V, 1.5 A synchronous step-down switching regulator evaluation board based on the L6983CQTR	<b>STEVAL-L6981CDR</b>
38 V, 1.5 A synchronous step-down converter with low quiescent current	<b>L6981CDR</b>
Applications	<b>Power tools</b>

Figure 1. STEVAL-L6981CDR circuit schematic



## Revision history

**Table 1. Document revision history**

Date	Version	Changes
16-Feb-2021	1	Initial release.
01-Mar-2021	2	Updated cover page description.

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