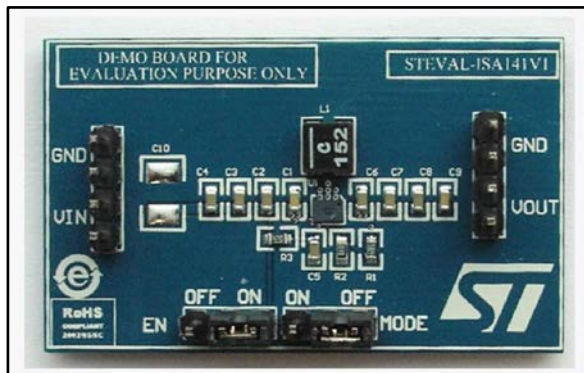


2 A, 2 MHz, $V_{out} = 3.3$ V, high-efficiency dual-mode buck-boost DC-DC converter based on the STBB3J



Features

- Input voltage range from 1.8 V to 5.5 V
- 2 A output current at 3.3 V in buck mode ($V_{IN} = 3.6$ V to 5.5 V)
- 800 mA output current at 3.3 V in boost mode ($V_{IN} = 2.0$ V)
- Typical efficiency higher than 94%
- $\pm 2\%$ DC feedback voltage tolerance
- Automatic transition between step-down and boost mode
- Adjustable output voltage from 1.2 V to 5.5 V
- Power save mode (PS) at light load

- 2.0 MHz fixed switching frequency
- Adjustable switching frequency up to 2.4 MHz (external synchronous square signal)
- Device quiescent current less than 50 μ A
- Load disconnect during shutdown
- Shutdown and soft-start functions
- Shutdown current < 1 A
- Available in Flip-Chip 20, pitch = 0.4 mm
- RoHS compliant

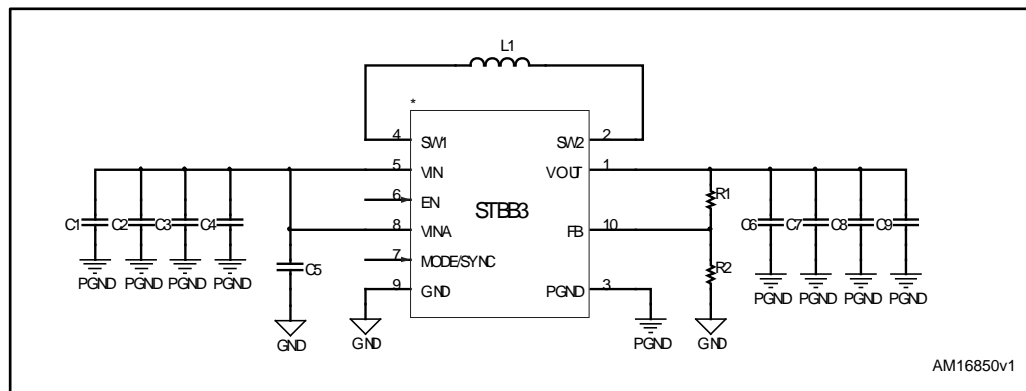
Description

The STEVAL-ISA141V1 is a product evaluation board based on the STBB3J, which is a fixed-frequency, high-efficiency, buck-boost DC-DC converter which provides output voltages from 1.2 V to 5.5 V starting from an input voltage in the range of 1.8 V to 5.5 V. This device can operate with input voltages higher than, equal to, or lower than the output voltage making the product suitable for cell lithium-ion applications where the output voltage is within the battery voltage range.

The MODE pin allows the selection between auto mode and forced PWM mode, taking advantage of either a lower power consumption or best dynamic performance.

1 Application circuit

Figure 1: STEVAL-ISA141V1



2 Revision history

Table 1: Document revision history

Date	Revision	Changes
09-Apr-2014	1	Initial release.

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