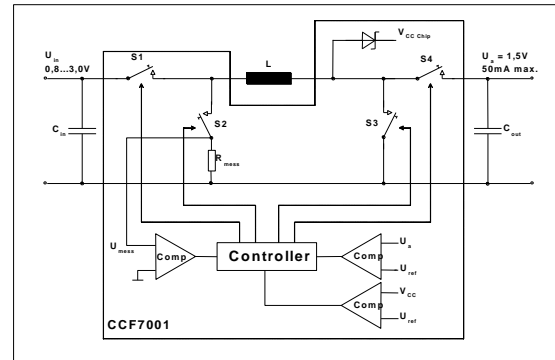


## CCF7001 DC/DC Converter

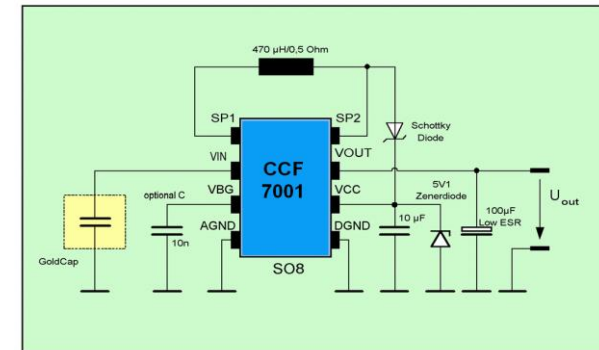
### FEATURES

- Buck - boost conversion
- Fixed Output voltage 1.45 V
- Output current up to 100 mA
- Input voltage range 0.8 to 3 V
- Start-Up voltage 1.0 V
- Low power consumption
- Low number of external components
- Temperature range -40 to 85°C
- High efficiency

Block Diagram



Application Circuit



### GENERAL DESCRIPTION

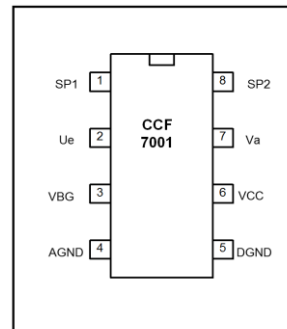
The CCF7001 is a CMOS DC/DC converter which provides a permanent regulated output voltage of 1.45 V by a wide input voltage range from 0.8 to 3 V and independent from an external load. A digitally controlled four phase switching scheme is used for up/ down conversion providing output voltage regulation. The IC has an "on chip" power supply generation. The circuit was designed for mobile applications using high energy capacitors as gold caps or Lithium-Ion rechargeable batteries.

### ELECTRICAL CHARACTERISTICS

Conditions unless otherwise specified:  $L=470\mu\text{H}$   $C=220\mu\text{F}$   $C_{\text{VBG}}=1\text{nF}$   $C_{\text{VCC}}=10\mu\text{F}$

### PIN CONFIGURATION (SOP 8)

PIN	NAME	DESCRIPTION
1	SP1	inductor pin 1
2	Ve	input voltage
3	VBG	internal bandgap voltage
4	AGND	analog ground
5	DGND	digital ground
6	VCC	internal supply voltage
7	Va	output voltage
8	SP2	inductor pin 2



Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Input Voltage Range	Ve		0.8		3	V
Current Consumption	Ie	@Ve=1.5V Ia=0A		200		µA
Output Voltage	Va		1.40	1.45	1.50	V
Output Current	Ia		0		100	mA
Output Ripple		@Ve=1.5V Ia=1mA			50	mV
Internal Supply Voltage	VCC		4.2	4.7	5.2	V
Intern. Bandgap Voltage	VBG			1.3		V
Efficiency				85		%

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