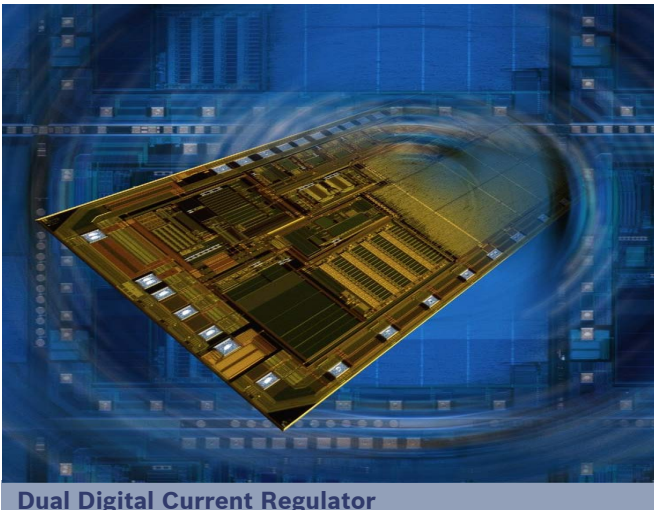


## Product Information Dual Digital Current Regulator – CG202



**BOSCH**

Invented for life



Dual Digital Current Regulator

The CG202 is a controller device used in conjunction with a switched current regulator, requiring an external power switch, a shunt and free wheeling diode.

A digital PWM signal (Duty Circle: 0 - 100%) sets the desired current as follows:  $I = \text{PWM} / 100 \times 1.2\text{V} / R_{\text{shunt}}$

The output frequency is set by an external RC combination and is independent of the frequency of the PWM Input signal.

The start up and regulation behaviour are separately selectable by external capacitors.

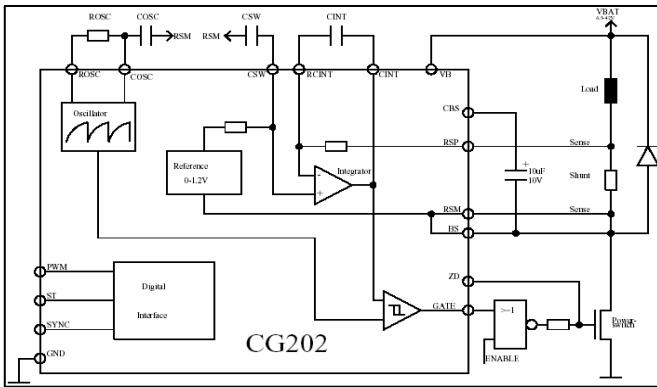
### Customer benefits:

- ▶ Excellent system know-how
- ▶ Smart concepts for system safety
- ▶ Secured supply
- ▶ Long- term availability of manufacturing processes and products
- ▶ QS9000 and ISO/TS16949 certified

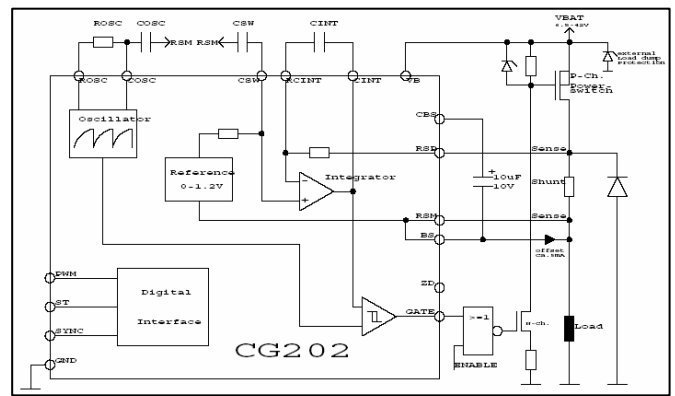
### Features

- ▶ Range of supply voltage: 8V - 32V
- ▶ Current regulation range with a 1Ω-shunt: 0-1200mA accuracy of the arithmetic mean current with a 1Ω-Shunt:  
±7mA at  $T_j = 25^\circ\text{C}$   
±65μA/K from -40°C to 150°C
- ▶ Optional external synchronization
- ▶ Diagnostic output
- ▶ Packaging: SOIC16

## Block diagram – CG202 in a low side configuration



## Block diagram – CG202 in a high side configuration



## Maximum ratings

Rating	Condition	Symbol	Min.	Max.	Unit
Supply voltage	Limits	V <sub>BAT</sub>	-0.5	42	V
	Operating		06. Mai	42	
	Within spec		8	32	
Current consumption	-0.5V ≤ V <sub>BAT</sub> < 42V	I <sub>VB</sub>		17	mA
Maximum voltages	PWM, SYNC → GND	V <sub>Max</sub>	-0.3	7	V
	BS, RSM → GND		-2	42	
	RSP → BS, RSM		-2	42	
Current regulation range	R <sub>Shunt</sub> = 1Ω	I <sub>Load</sub>	0	1200	mA
Junction temperature		T <sub>j</sub>	-40	150	°C
Storage temperature		T <sub>s</sub>	-40	150	°C

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