► Fan control

E910.16

FEATURES

- Supply voltage range VS 7.2V to 17.5V
- Overvoltage shut down
- Low standby current (power down mode)
- Limitation of power dissipation by voltage dependent current limitation
- Externally adjustable minimum current
- Externally adjustable over temperature protection featuring load current reduction
- Control of current distribution in 2 parallel power-FETs
- Turn on the power-FETs during load-dump
- –40°C to +125°C operating temperature
- SO16w package

APPLICATION

- Fan regulation

DESCRIPTION

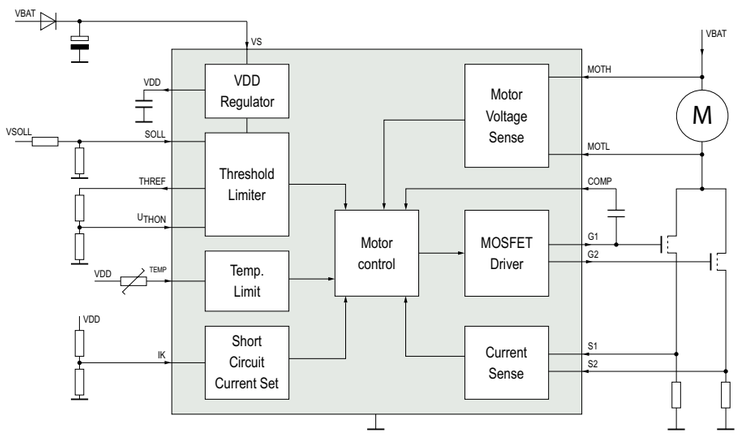
The IC controls the voltage across a DC fan motor as a function of the voltage applied to the control input “SOLL”. The IC delivers the gate voltage for one or two (parallel) external power-FETs, which linearly drive the load current of the motor. The drain currents of the two external power-FETs are matched by measuring the voltages across each individual shunt resistor.

Rapid changes in control voltage are converted into smooth motor current transients.

Overcurrent limitation is provided as a function of the motor voltage. Over temperature protection is realized as load current reduction to achieve a minimum torque of the motor even at the temperature limit.

The sleep mode with very low standby current of typ. 50µA will be activated when the control voltage “SOLL” drops below a minimum value, which can be adjusted externally.

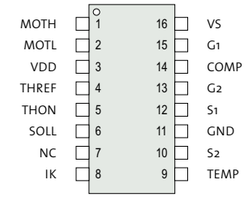
BLOCK DIAGRAM



PINNING

Pin	Name	Description
1	MOTH	Positive motor terminal
2	MOTL	Negative motor terminal
3	VDD	Regulator output voltage 5 V (switched off in standby)
4	THREF	Reference voltage for IC activation (won`t be switched off)
5	THON	Threshold voltage for IC activation
6	SOLL	Input for nominal motor voltage
7	NC	Not connected
8	IK	Voltage for maximum short circuit current of driver
9	TEMP	Temperature input for power reduction
10	S2	Current sense input of slave FET
11	GND	Ground connection
12	S1	Current sense input of master FET
13	G2	Gate control of slave FET
14	COMP	Feedback input of motor voltage regulation
15	G1	Gate control of master FET
16	VS	Supply voltage

PACKAGE



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