L9951

DOOR ACTUATOR DRIVER

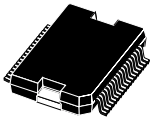
DATA BRIEF

1 FEATURES

- One half bridge for 7.4A load (r_{on} = 150mΩ)
- Two half bridges for 5A load (r_{on} = 200mΩ)
- Two highside drivers for 1.25A load (r_{on} = 800 mΩ)
- Programmable Softstart function to drive loads with higher inrush currents (i.e.current >7.4A, >5A, >1.25A)
- Very low current consumption in standby mode (I_S < 3µA, typ. $T_j \leq 85$ °C)
- All outputs short circuit protected
- Current monitor output for all highside drivers
- All outputs over temperature protected
- Open load diagnostic for all outputs
- Overload diagnostic for all outputs
- Programmable PWM control of all outputs
- Charge Pump output for reverse polarity protection

2 APPLICATION

- Rear Door Actuator Driver with bridges for door lock and safe lock and two 5W or 10W-light bulbs.



PowerSO36

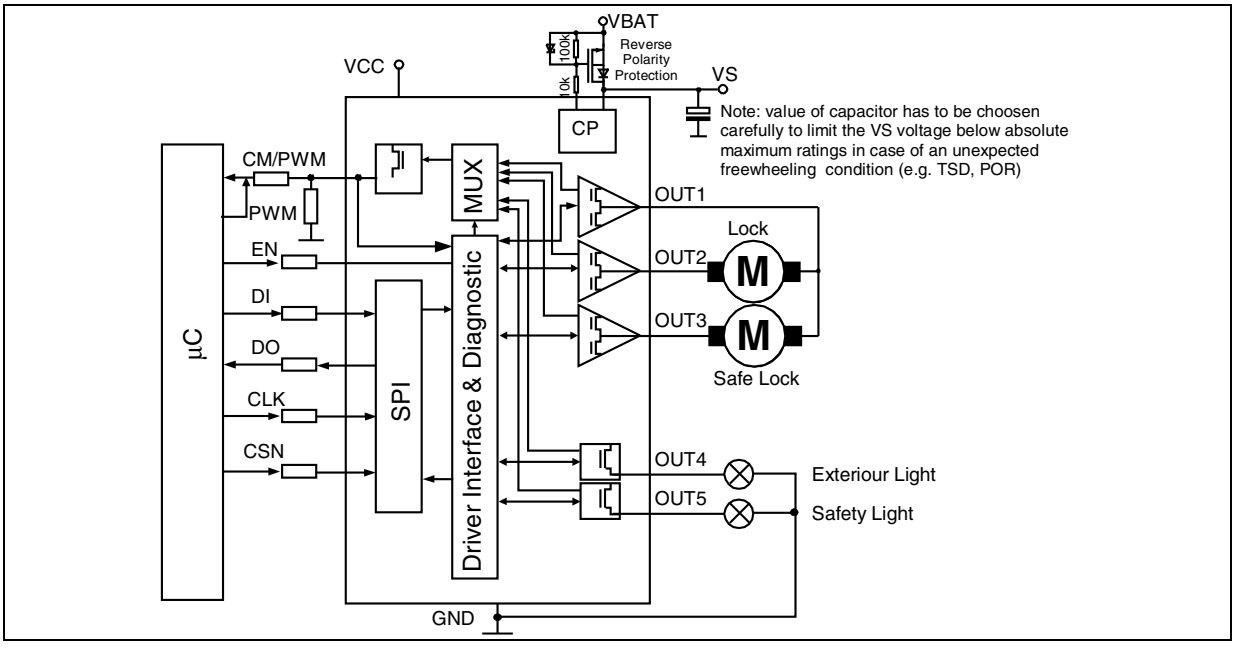
Table 1. Order Codes

Part Number	Package
L9951	PowerSO36

3 DESCRIPTION

The L9951 is a microcontroller driven multifunctional rear door actuator driver for automotive applications. Up to two DC motors and two grounded resistive loads can be driven with three half bridges and two highside drivers. The integrated standard serial peripheral interface (SPI) controls all operation modes (forward, reverse, brake and high impedance). All diagnostic informations are available via SPI.

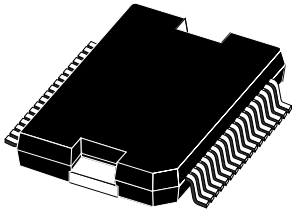
BLOCK DIAGRAM



DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A			3.60			0.1417
a1	0.10		0.30	0.0039		0.0118
a2			3.30			0.1299
a3	0		0.10			0.0039
b	0.22		0.38	0.0087		0.0150
c	0.23		0.32	0.0091		0.0126
D	15.80		16.00	0.6220		0.6299
D1	9.40		9.80	0.3701		0.3858
E	13.90		14.5	0.5472		0.5709
E1	10.90		11.10	0.4291		0.4370
E2			2.90			0.1142
E3	5.80		6.20	0.2283		0.2441
e		0.65			0.0256	
e3		11.05			0.4350	
G	0		0.10			0.0039
H	15.50		15.90	0.6102		0.6260
h			1.10			0.0433
L	0.8		1.10	0.0315		0.0433
N	10˚ (max)					
s	8˚ (max)					

Note: “D and E1” do not include mold flash or protusions.
- Mold flash or protusions shall not exceed 0.15mm (0.006”)
- Critical dimensions are "a3", "E" and "G".

OUTLINE AND MECHANICAL DATA



PowerSO-36

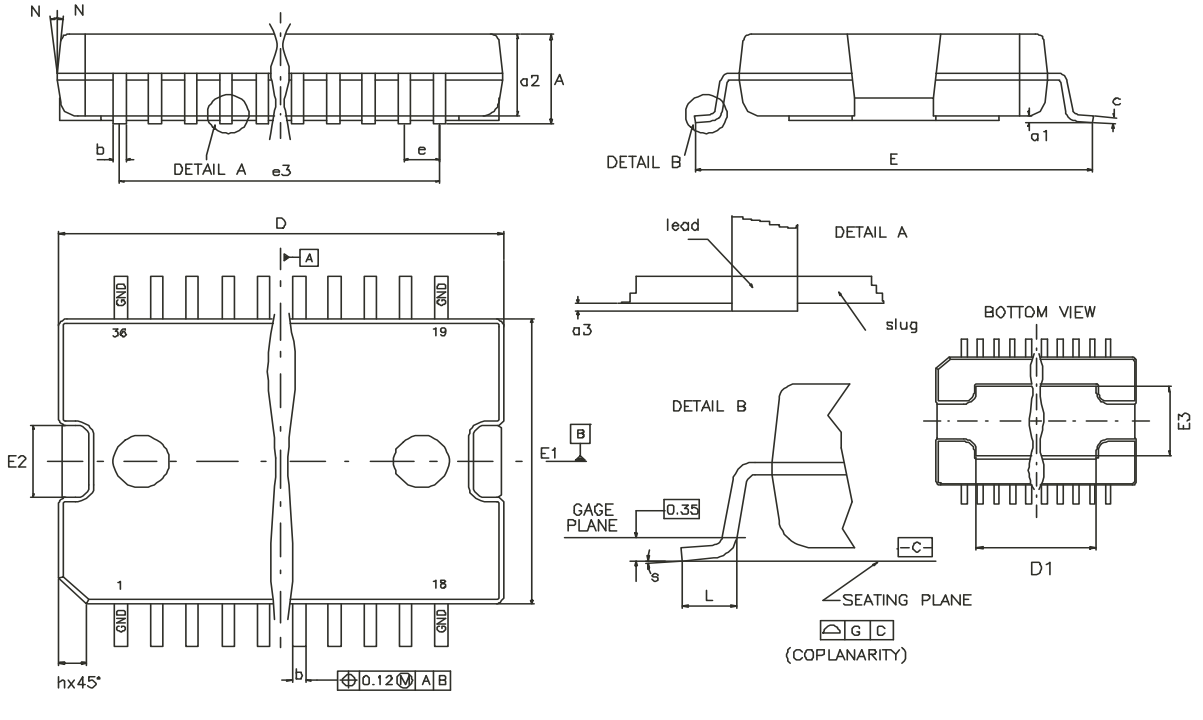


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Table 2. Revision History

Date	Revision	Description of Changes
March 2004	1	First Issue
April 2004	2	Modified the style sheet following Design Guide last rev. rules.
24-Sep-2013	3	Updated Disclaimer

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