

Data Sheet

**品 名：3-CHANNEL PC POWER SUPPLY
SUPERVISORS**

奇高料號：CG8510

版 本：Rev 0.20 (Preliminary)

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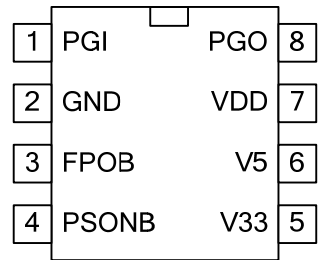
發文日期：2009/02/13

Description

The CG8510 is a PC switching power supply monitor with minimum external components. It provides protection circuits, power-good output (PGO), fault protection output (FPOB) and on/off control (PSONB).

The over-voltage protection (OVP) monitors 3.3V, 5V and 12V (12V supplies voltage detects via VDD pin), the under-voltage protection (UVP) monitors 3.3V and 5V. When an OV or UV condition is detected, the fault protection output (FPOB) is latched high and the power good output (PGO) go low. PSONB from low to high resets the latch. When OV, UV and PGI are all right, the power good output (PGO) will be issue. A built-in 3.5ms delay and 38ms debounce for PSONB turn off FPOB.

Pin Configuration (Top View)



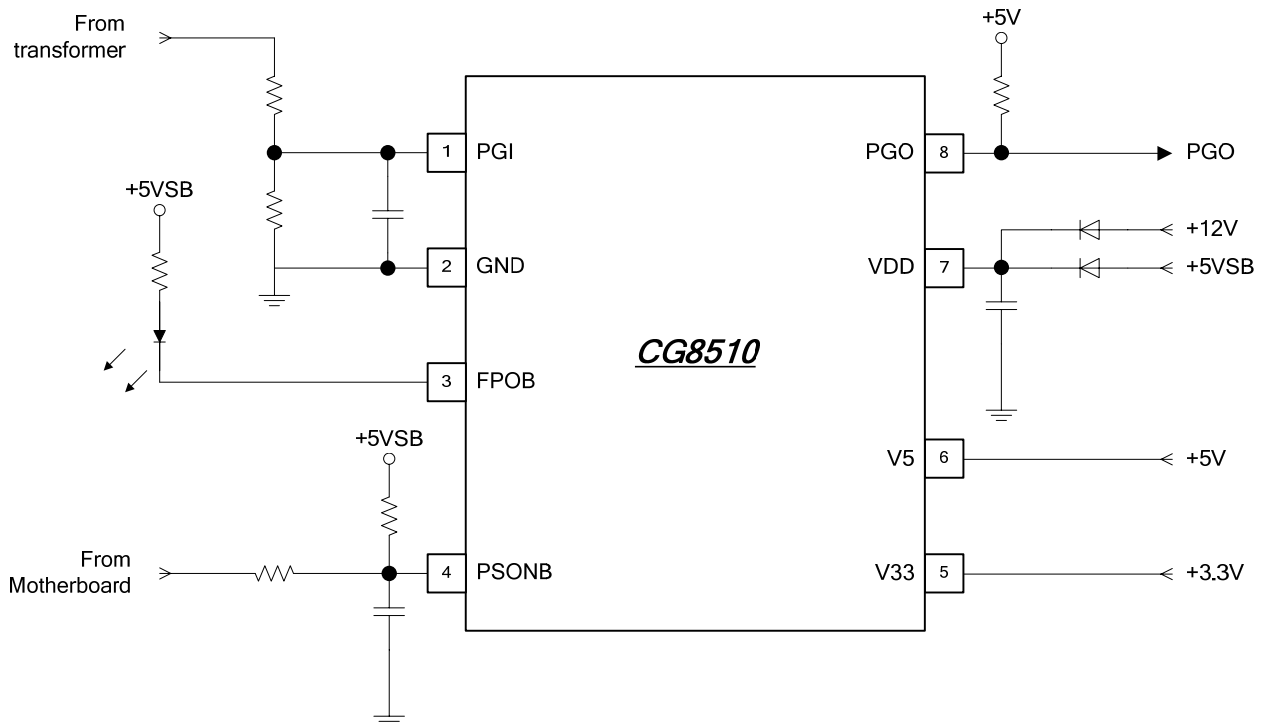
Features

- Over-voltage protection (OVP) for 3.3V, 5V and 12V supplies
- Under-voltage protection (UVP) for 3.3V and 5V.
- Fault protection output (FPOB) with open drain output
- Power good output (PGO) with open drain output
- 350ms PGO delay time
- 38ms PSONB debounce time
- 50us OVP debounce time
- 73us UVP debounce time
- 73us PGI debounce time
- 3.5ms FPOB turn off delay time
- 75ms UVP delay time

Ordering Information

Order Number	Package Type	Packing	Top Marking
CG8510DX08	P-DIP-8 (RoHS)	Tube	CG8510DX08
CG8510SX08	SOP-8 (RoHS)	Tube	CG8510SX08

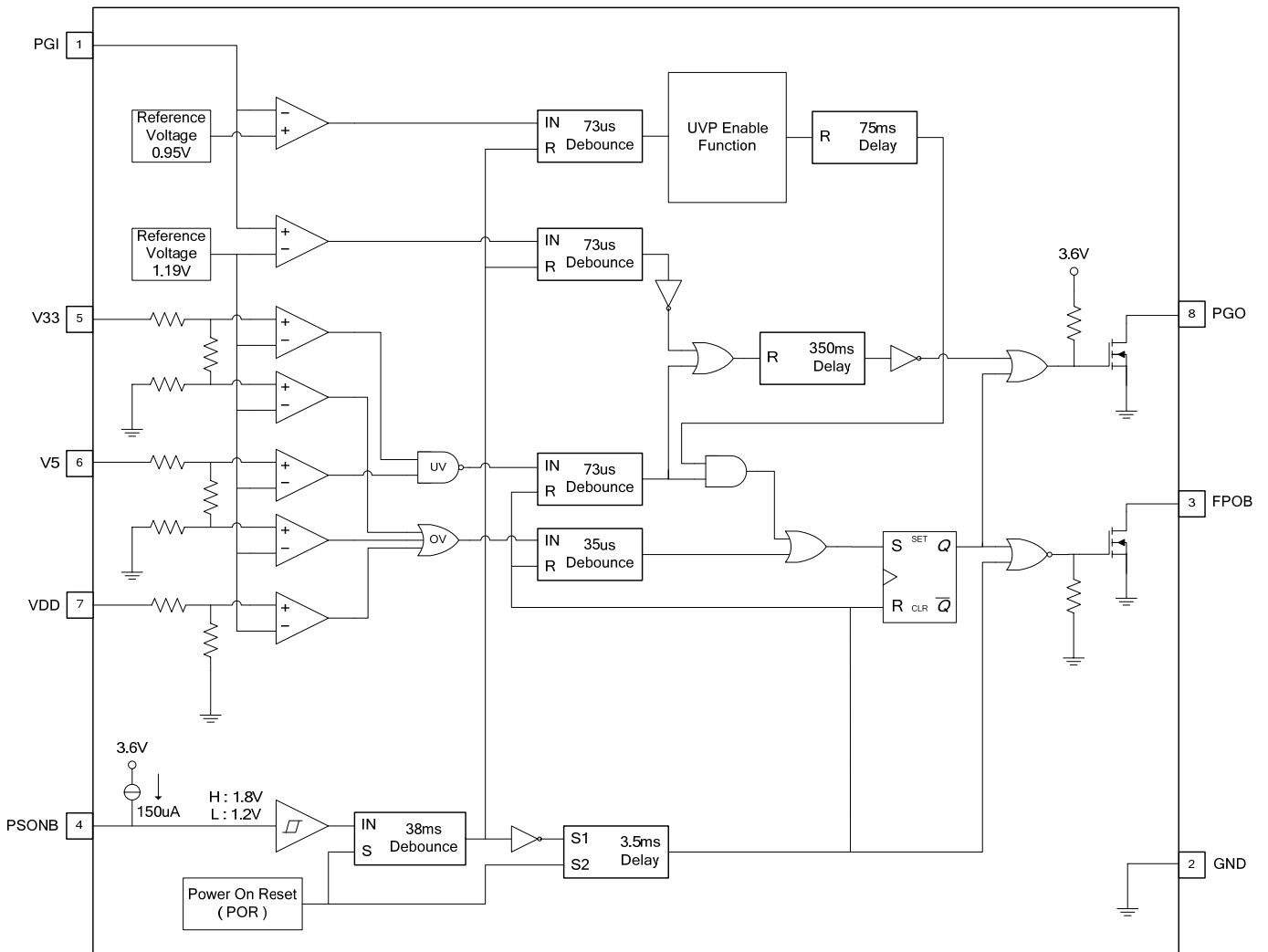
Typical Application Circuit



1. Pin Description

Pin	Symbol	Function
1	PGI	AC power good input pin.
2	GND	Ground.
3	FPOB	Open drain output of the fault protection.
4	PSONB	ON/OFF control input pin.
5	V33	3.3V input pin for OVP and UVP.
6	V5	5V input pin for OVP and UVP.
7	VDD	Power supply. 12V input pin for OVP.
8	PGO	Open drain output of power good signal.

2. Block Diagram



3. Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Units
Supply Voltage	Vdd	-0.3	16	V
Supply Voltage Rising Time		1	-	mS
Input Voltage	PGI, PSONB, V5, V33	-0.3	7	V
Output Voltage	PGO	-0.3	7	V
	FPOB	-0.3	16	V
Operating Temperature Range		-40	85	°C
Storage Temperature Range		-65	150	°C
Soldering Temperature		-	260	°C

Note : Stresses above those listed may cause permanent damage to the devices.

4. Electrical Characteristics (T_A=25°C, VDD=5V, unless otherwise noted.)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Power Supply						
Operating Voltage	V _{DD}		4	-	15	V
Supply Current	I _{DD}	PSONB = 5V	-	-	1	mA
Over Voltage and Under Voltage Detection						
Over Voltage Threshold	V33		3.7	3.9	4.1	V
	V5		5.7	5.95	6.2	V
	VDD		12.9	13.4	13.9	V
Under Voltage Threshold	V33		2.0	2.2	2.4	V
	V5		3.3	3.5	3.8	V
PGI Threshold Voltage	PGI - 1		1.15	1.19	1.24	V
	PGI - 2		0.90	0.95	1.00	V
Temperature Coefficient of Voltage	TCV		-0.02	-	0.02	% / °C
Output						
Low Level Output Voltage (FPOB)	V _{OL(FPOB)}	I _{SINK} = 20mA	-	-	0.4	V
Low Level Output Voltage (PGO)	V _{OL(PGO)}	I _{SINK} = 20mA	-	-	0.4	V
Leakage Current of FPOB and PGO	I _{LKG}		-	-	1	uA
PSONB Control						
High Level Input Voltage	V _{IH}		1.8	-	-	V
Low Level Input Voltage	V _{IL}		-	-	1.2	V
Pull-up Current			-	150	-	uA
Timing						
PSONB Debounce Time	t _{db1}		24	38	52	mS
OVP Debounce Time	t _{db2}		35	50	65	uS
UVP Debounce Time	t _{db3}		47	73	100	uS
PGI Debounce Time	t _{db4}		47	73	100	uS
PGO Delay Time	t _{delay1}		300	350	400	mS
FPOB Turn-off Time (PGO to FPOB)	t _{delay2}		2	3.5	5	mS
UVP Enable Delay Time	t _{delay3}		49	75	100	mS

5. Timing Diagrams

Fig.1.

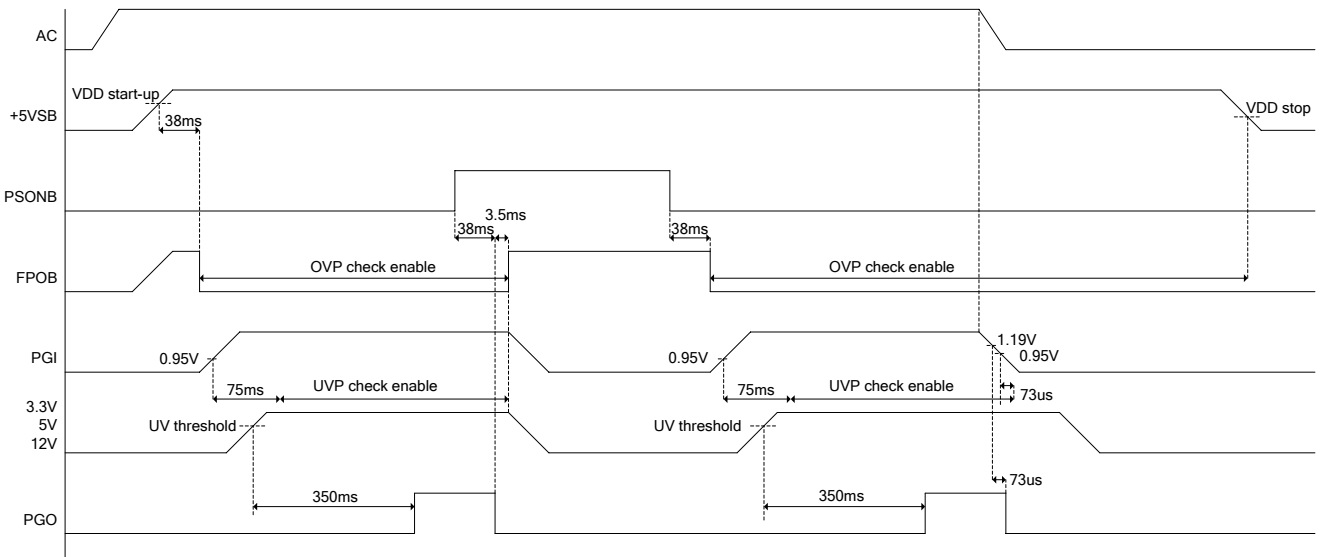
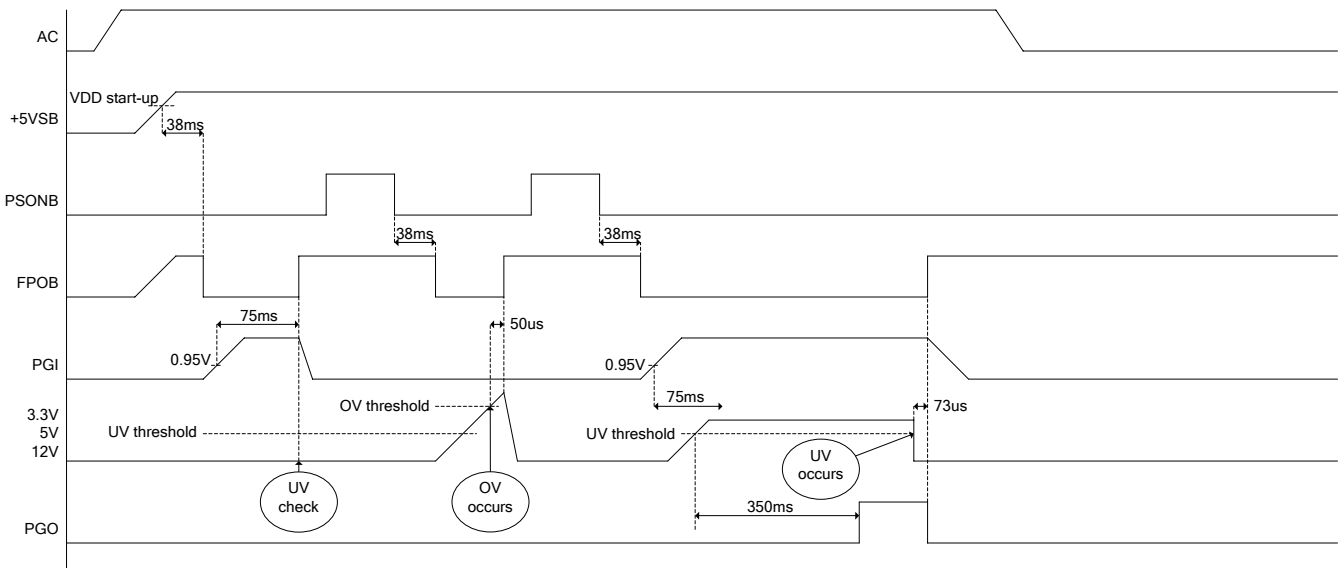


Fig.2.



6. Package Outlines

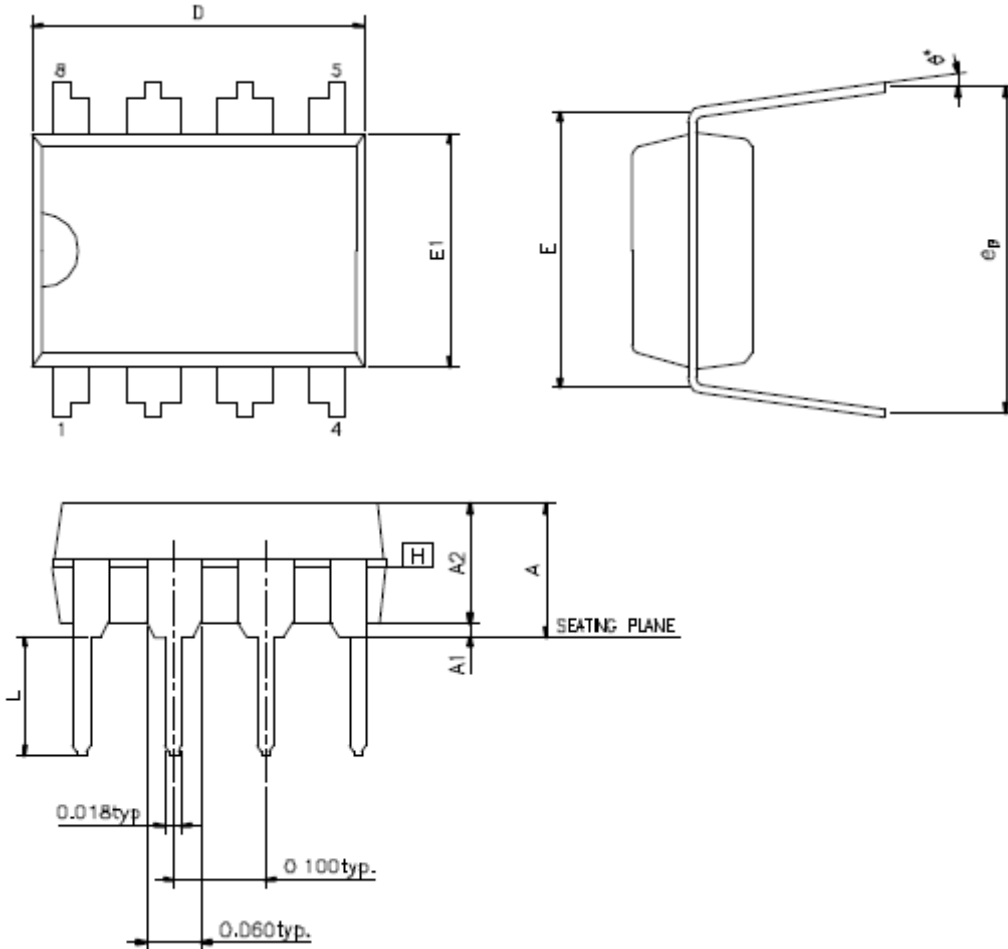
6.1 P-DIP8

PACKAGE DIMENSIONS

Plastic Dual In-line Package

P-DIP 8

UNIT : inch



Symbols	Dimensions In Inches		
	MIN.	NOR.	MAX.
A	---		0.220
A1	0.014		---
A2	0.118	0.130	0.149
D	0.336	0.365	0.420
E	0.300 BSC		
E1	0.232	0.250	0.273
L	0.109	0.130	0.157
eB	0.306	0.355	0.394

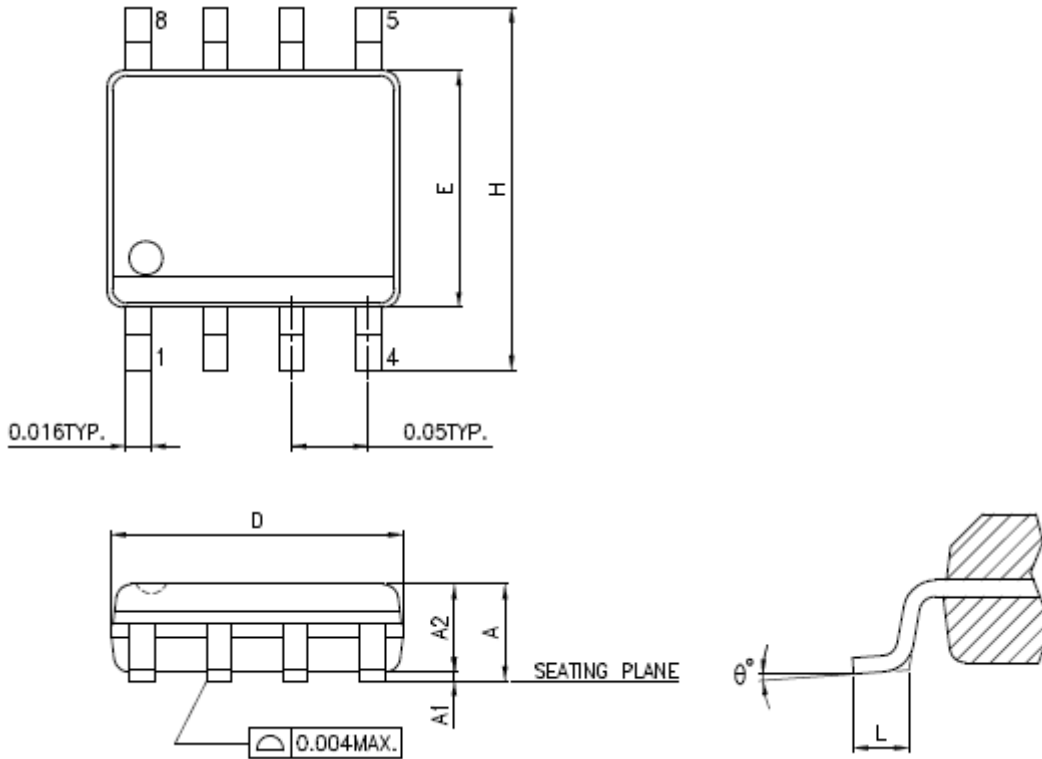
6.2 SOP 8

PACKAGE DIMENSIONS

Small Outline Package

SOP 8

UNIT : inch



Symbols	Dimensions In Inches	
	MIN.	MAX.
A	0.050	0.072
A1	0.000	0.010
A2	-----	0.062
D	0.185	0.200
E	0.147	0.160
H	0.225	0.249
L	0.013	0.053
θ	0°	8°

7. Update History

Revision	Date	Update
0.10	Nov. 06, 2008	Preliminary version
0.20	Feb. 12, 2009	6. Package Outlines