

LC898119XC

CMOS LSI

Optical Image Stabilization (OIS) Controller & Driver

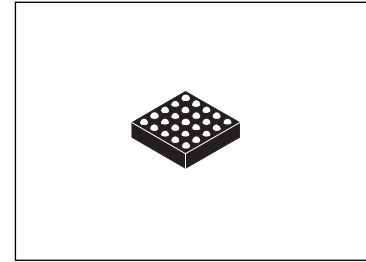


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Overview

LC898119XC is a system LSI (WLP type) integrating a digital signal processing function for Optical Image Stabilization (OIS) control and a saturation-driven H bridge driver function.



WLCSP25, 2.0x2.0

Function

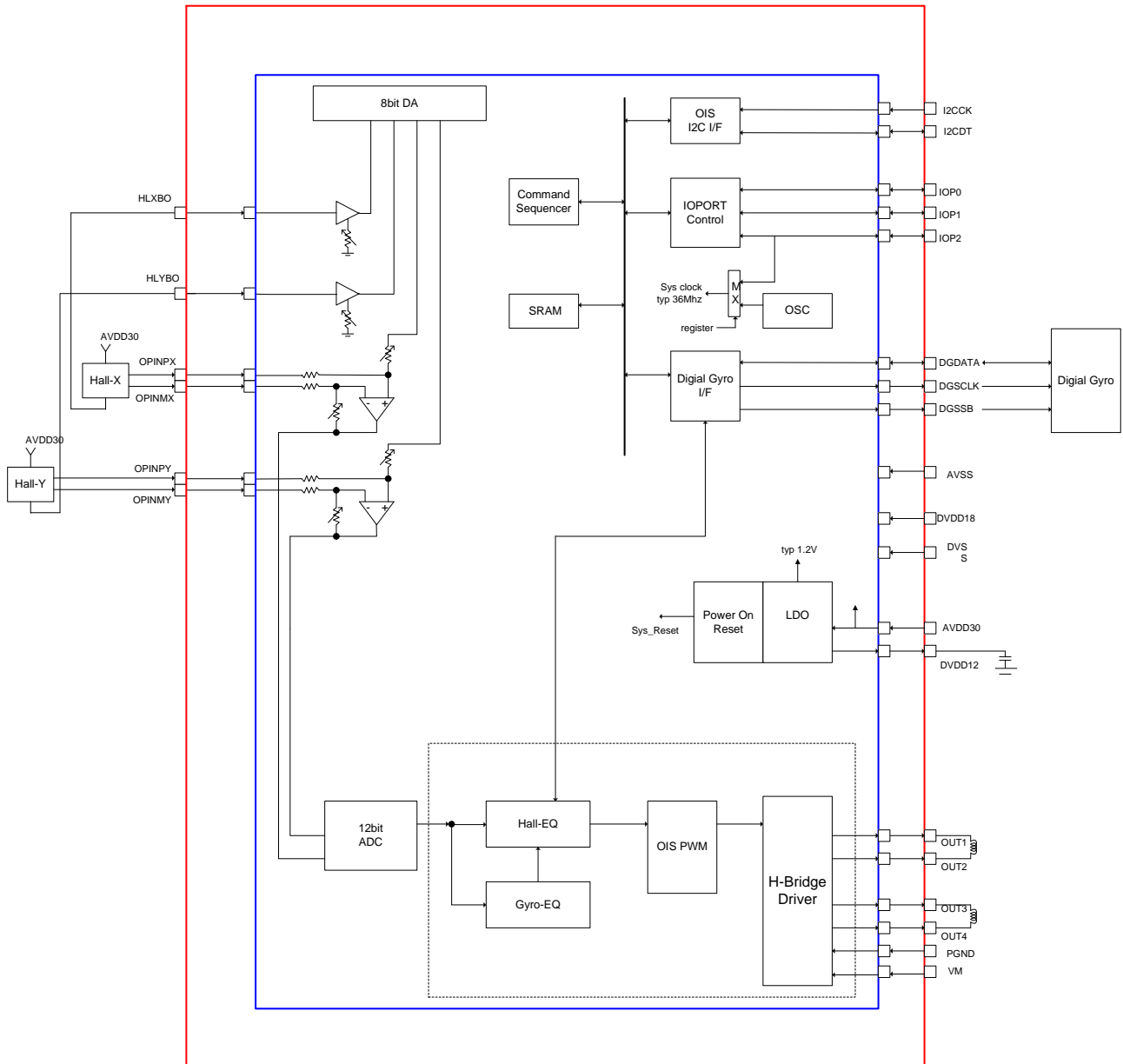
- Digital signal processing
 - Built-in digital servo circuit
 - Built-in Gyro filter
 - AD converter
 - 12bit
 - Input 2ch
 - Equipped with a sample-hold circuit
 - DA converter
 - 8bit
 - Output 2ch
 - Built-in Serial I/F circuit (2-wire I²C-Bus)
 - Built-in Hall Bias circuit
 - Built-in Hall Amp
(Gain of Op-amp : ×60, ×90, ×130, ×200)
 - Built-in OSC (Oscillator)
 - Typ. 36MHz
 - Built-in LDO (Low Drop-Out regulator)
 - Digital Gyro I/F for the companies (SPI Bus)
(Please refer for the details)
- Motor Driver
 - Saturation-drive H bridge ×2ch
 - I_O max : 220mA
- Package
 - WLCSP25, 2.00mm × 2.00mm,
thickness Max. 0.675mm, with B/C
 - Pb-free / Halogen Free
- Power Supply Voltage
 - AD/DA/VGA/LDO/OSC : AVDD30 = 2.6V to 3.6V
 - Digital I/O : DVDD18 = 1.8V±10%
 - Driver : VM = 2.6V to 3.6V
 - Core Logic : Generation in LDO
DVDD12 = typ 1.2V output

* I²C Bus is a trademark of Philips Corporation.

ORDERING INFORMATION

See detailed ordering and shipping information on page 5 of this data sheet.

Block Diagram

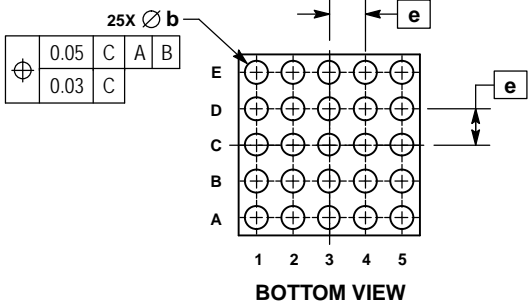
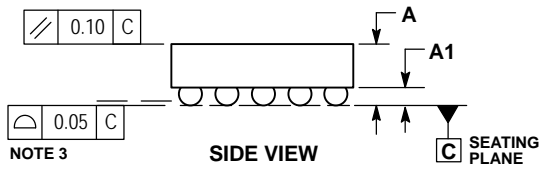
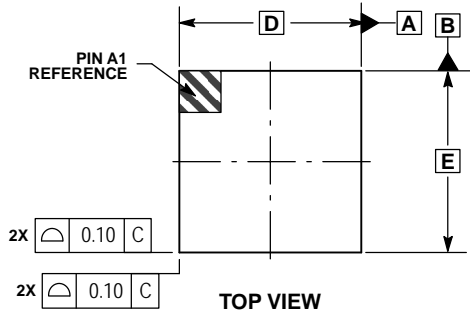


Example of wiring diagram (Hall) in LC898119XC

Package Dimensions

unit : mm

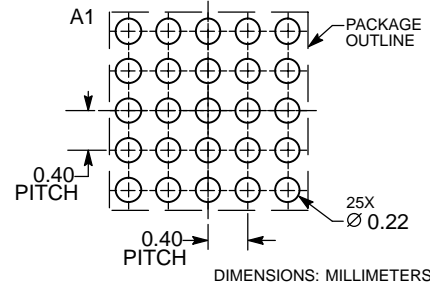
WLCSP25, 2.0x2.0
 CASE 567HK
 ISSUE O



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
 2. CONTROLLING DIMENSION: MILLIMETERS.
 3. COPLANARITY APPLIES TO SPHERICAL CROWNS OF SOLDER BALLS.

DIM	MILLIMETERS	
	MIN	MAX
A	---	0.675
A1	0.15	0.25
b	0.21	0.31
D	2.00 BSC	
E	2.00 BSC	
e	0.40 BSC	

RECOMMENDED SOLDERING FOOTPRINT*



*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

Pin Assignment

Bottom View

	A	B	C	D	E
1	DVDD12	AVDD30	AVSS	OPINPY	OPINPX
2	IOP0	OPINMY	OPINMX	HLXBO	HLYBO
3	IOP1	IOP2	DVDD18	DVSS	DGCLK
4	I2CCK	I2CDT	VM	DGSSB	DGDATA
5	OUT1	OUT2	PGND	OUT3	OUT4

	Driver		IO VDD
	Analog VDD		Logic Core VDD (Output)
	Analog GND		Digital GND

<typ> I : INPUT, O : OUTPUT, B : BIDIRECTION, P : Power, GND

Ball No	Pin Name	type	Description
A1	DVDD12	P	LDO Power supply out (Logic Core VDD (typ 1.2V))
A2	IOP0	B	General-purpose IOPORT
A3	IOP1	B	General-purpose IOPORT
A4	I2CCK	I	I2C_IF clock
A5	OUT1	O	Driver Output
B1	AVDD30	P	Analog Power(2.6V to 3.6V)
B2	OPINMY	I	Hall-Y OpAmp input-
B3	IOP2	B	General-purpose IOPORT / External Clock input (change at Register)
B4	I2CDT	B	I2C_IF Data
B5	OUT2	O	Driver Output
C1	AVSS	P	Analog GND
C2	OPINMX	I	Hall-X OpAmp input-
C3	DVDD18	P	IO Power (1.62V to 1.98V)
C4	VM	P	Driver Power
C5	PGND	P	Driver GND
D1	OPINPY	I	Hall-Y OpAmp input+
D2	HLXBO	O	Hall-X Bias (Current Drive)
D3	DVSS	P	Logic GND
D4	DGSSB	B	Digital Gyro IF Chip Select (O)
D5	OUT3	O	Driver Output
E1	OPINPX	I	Hall-X OpAmp input+
E2	HLYBO	O	Hall-X Bias (Current Driver)
E3	DGCLK	O	Digital Gyro IF clock
E4	DGDATA	B	Digital Gyro IF data
E5	OUT4	O	Driver Output

ORDERING INFORMATION

Device	Package	Shipping (Qty / Packing)
LC898119XC-MH	WLCSP25 2.0x2.0 (Pb-Free / Halogen Free)	4000 / Tape & Reel

† For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D. http://www.onsemi.com/pub_link/Collateral/BRD8011-D.PDF

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