

LC898119XC

CMOS LSI

Optical Image Stabilization (OIS) Controller & Driver

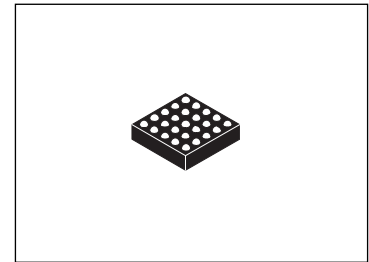


ON Semiconductor®

www.onsemi.com

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

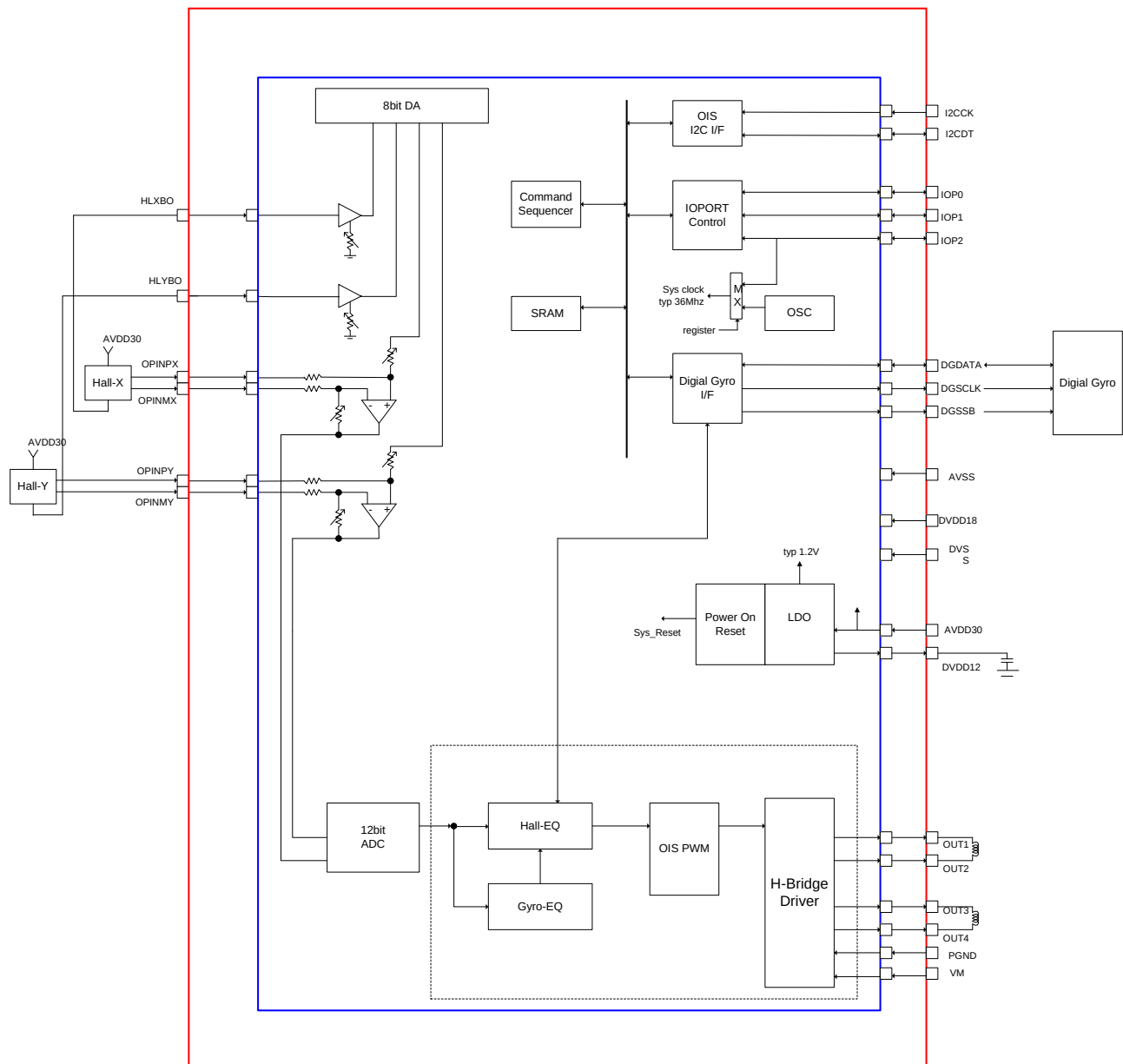
- Digital signal processing
 - Built-in digital servo circuit
 - Built-in Gyro filter
 - AD converter
 - 12bit
 - Input 2ch
 - Equipped with a sample-hold circuit
 - DA converter
 - 8bit
 - Output 2ch
 - Built-in Serial I/F circuit (2-wire I²C-Bus)
 - Built-in Hall Bias circuit
 - Built-in Hall Amp
(Gain 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

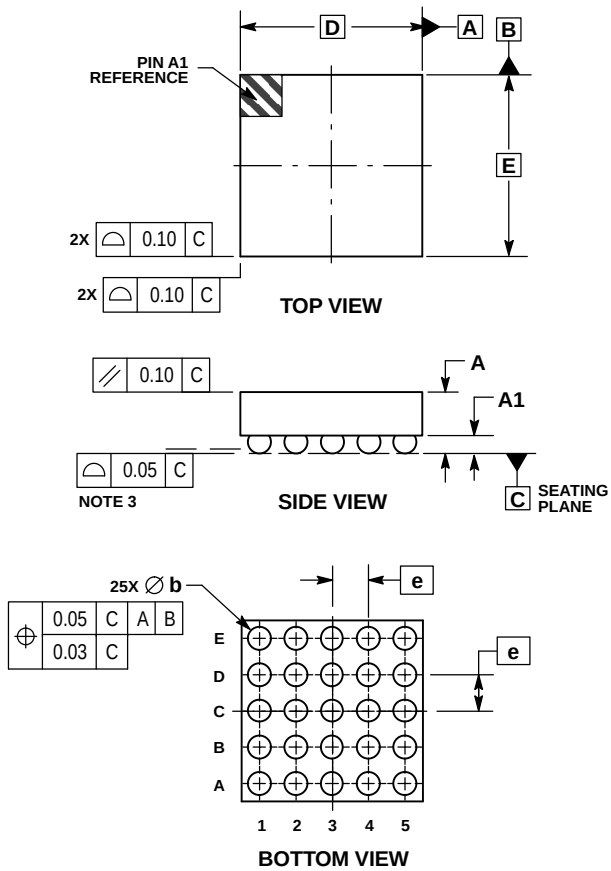
Package Dimensions

unit : mm

WLCSP25, 2.0x2.0

CASE 567HK

ISSUE O

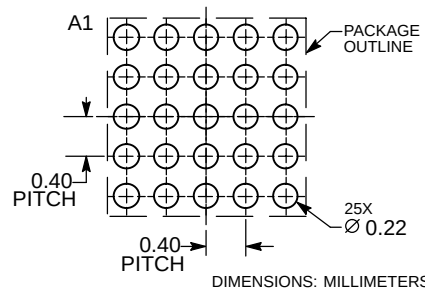


NOTES:

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

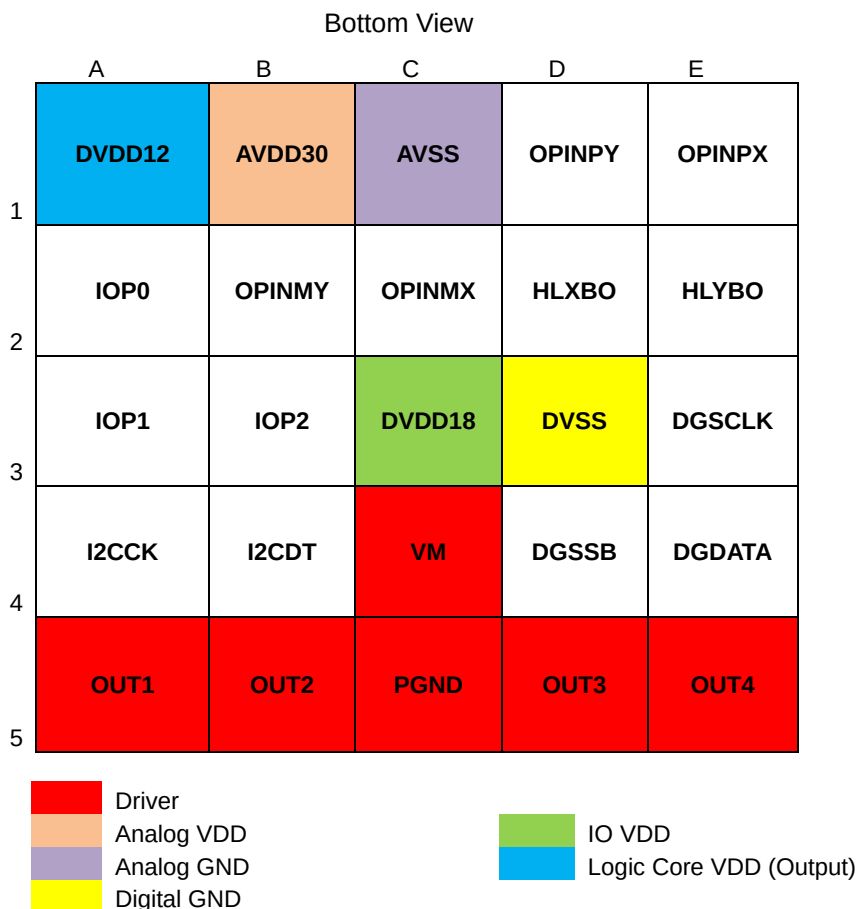
DIM	MILLIMETERS	
	MIN	MAX
A	---	0.675
A1	0.15	0.25
b	0.21	0.31
D	2.00 BSC	
E	2.00 BSC	
e	0.40 BSC	

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



<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

ON Semiconductor and the ON logo are registered trademarks of Semiconductor Components Industries, LLC (SCILLC) or its subsidiaries in the United States and/or other countries. SCILLC owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of SCILLC's product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SCILLC assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in SCILLC data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. SCILLC does not convey any license under its patent rights nor the rights of others. SCILLC products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that SCILLC was negligent regarding the design or manufacture of the part. SCILLC is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.