Block Diagram
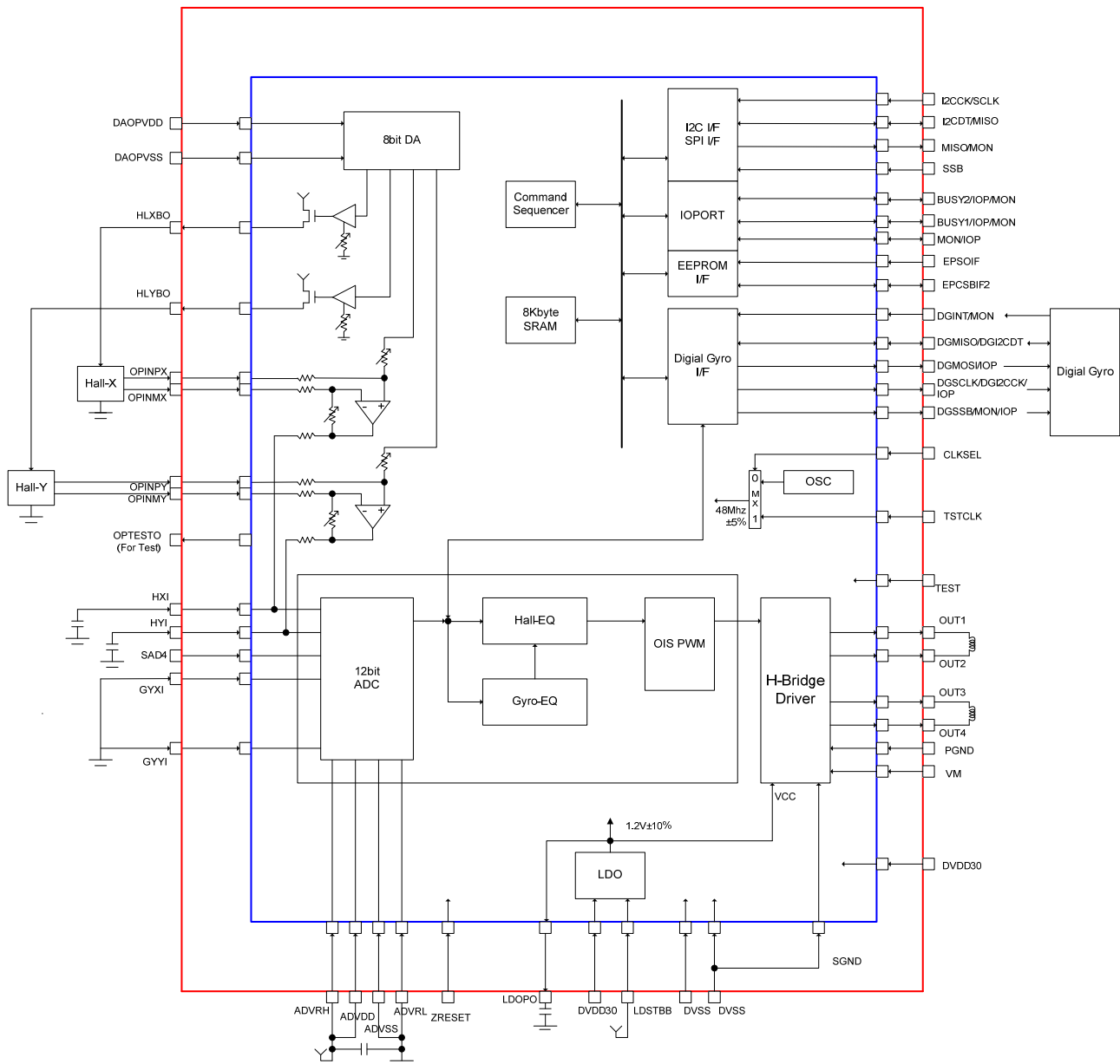

Figure 3.1 Example of wiring diagram (Hall) in LC898111AXB
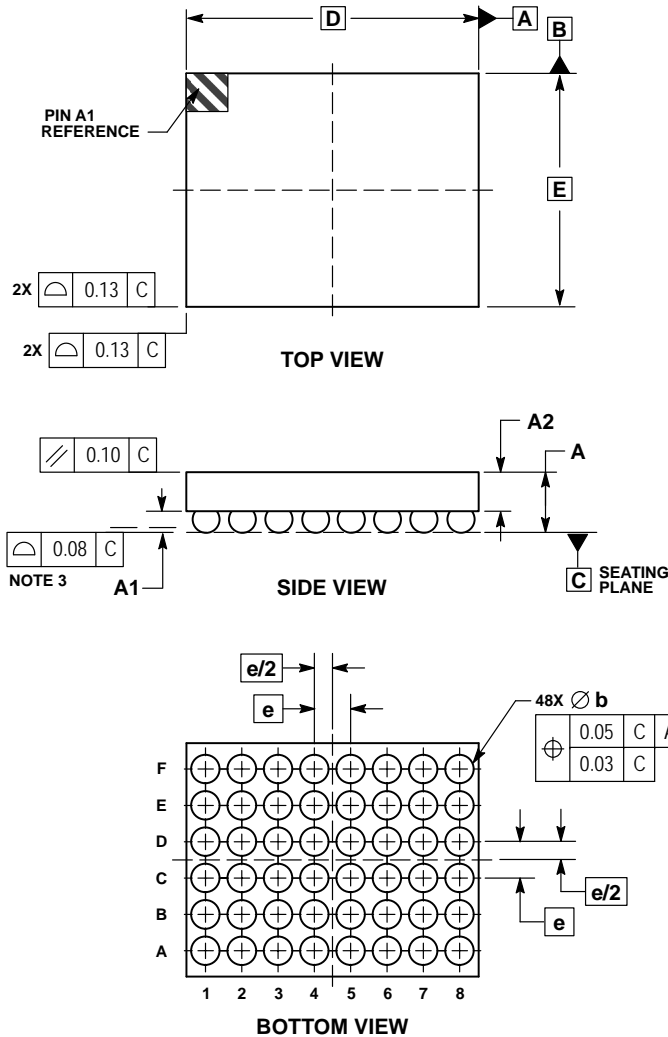
Package Dimensions

unit : mm

WLCSP48, 3.22x2.57
CASE 567GE
ISSUE O

TOP VIEW

PIN A1 REFERENCE

D | A | B

E

2X ⌓ 0.13 C
2X ⌓ 0.13 C

SIDE VIEW

∥ 0.10 C

A2 | A

⌓ 0.08 C
NOTE 3
A1

C SEATING PLANE

BOTTOM VIEW

e/2
e

48X ⌀ b

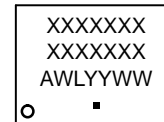⊕ | 0.05 | C | A | B
 | 0.03 | C

e/2
e

F E D C B A
1 2 3 4 5 6 7 8

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	---	0.69
A1	0.16	0.26
A2	0.43 REF	
b	0.21	0.31
D	3.22 BSC	
E	2.57 BSC	
e	0.40 BSC	

GENERIC MARKING DIAGRAM*

XXXXXXX
XXXXXXX
AWLYYWW
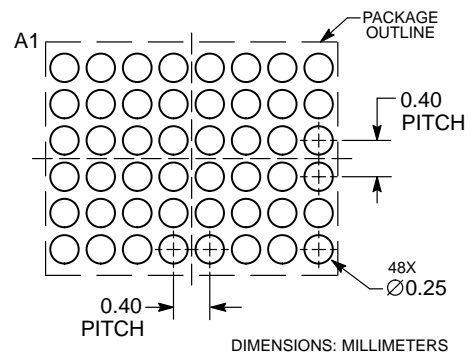
○

XXXXXXX = Device Code
A = Assembly Location
WL = Wafer Lot
YY = Year
WW = Work Week
▪ = Pb-Free Package

*This information is generic. Please refer to device data sheet for actual part marking.

RECOMMENDED SOLDERING FOOTPRINT*

A1

PACKAGE OUTLINE

0.40 PITCH

0.40 PITCH

48X ⌀0.25

DIMENSIONS: MILLIMETERS

*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

Top View

	F	E	D	C	B	A
1	OPTESTO	OPINPY	ADVDD	ADVSS	GYYI	HXI
2	HLXBO	OPINMY	ADVRH	GYXI	DVSS	I2CDT
3	EPSOIF	DAOPVDD	ADVRL	HYI	EPCSBIF2	I2CCK
4	DVDD30	DAOPVSS	OPINPX	SAD4	SSB	MISO
5	BUSY2	HLYBO	OPINMX	ZRESET	LDOPO	DVDD30
6	BUSY1	TEST	DVSS	TSTCLK	LDSTBB	DGSCLK
7	VM	MON	CLKSEL	DGMOSI	DGMISO	DGINT
8	OUT4	OUT3	OUT2	OUT1	PGND	DGSSB

Legend:
- Driver
- DAC
- OpAmp
- ADC
- EEPROM i/f
- Logic GND
- IO VDD (2.6V to 3.6V)
- Logic Core VDD (1.14 to 1.26V)

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

Ball No	Pin Name	type	Description
F8	OUT4	O	Driver Output
F7	VM	P	Driver VDD (2.6V to 3.6V)
F6	BUSY1	B	EEPROM I/F (at I^{2}C type EEPROM) / BUSY1(O) / General-purpose IOPORT(B) / inner signal Monitor(O)
F5	BUSY2	B	BUSY2(O) / General-purpose IOPORT(B) / inner signal Monitor(O)
F4	DVDD30	P	Logic IO VDD (2.6V to 3.6V)
F3	EPSOIF	I	EEPROM I/F
F2	HLXBO	O	Hall-X Bias (Current Drive)
F1	OPTESTO	O	OpAmp Test out
E8	OUT3	O	Driver output
E7	MON	B	inner signal monitor / General-purpose IOPORT
E6	TEST	I	SPI & External clock case sets "1" other cases set "0"
E5	HLYBO	O	Hall-Y Bias (Current Drive)
E4	DAOPVSS	P	DA&Opamp VSS
E3	DAOPVDD	P	DA&Opamp VDD (2.6V to 3.6V)
E2	OPINMY	I	Hall-Y OpAmp input−
E1	OPINPY	I	Hall-Y OpAmp input+
D8	OUT2	O	Driver Output
D7	CLKSEL	I	change pin of OSC(0) and External clock(1)
D6	DVSS	P	Logic GND
D5	OPINMX	I	Hall-X OpAmp input−
D4	OPINPX	I	Hall-X OpAmp input+
D3	ADVRL	I	ADC Reference Voltage Low input
D2	ADVRH	I	ADC Reference Voltage High input
D1	ADVDD	P	AD VDD (2.6V to 3.6V)
C8	OUT1	O	Driver Output
C7	DGMOSI	B	Digital Gyro (4-wire)IF data(O) / HPS Control(O) / General-purpose IOPORT(B)
C6	TSTCLK	I	CLKSEL=1 : External Clock, CLKSEL=0 : change pin of I^{2}C(0) and SPI(1)
C5	ZRESET	I	Hard Wafer Reset
C4	SAD4	I	General-purpose AD input
C3	HYI	I	Hall-Y AD input
C2	GYXI	I	Gyro-X AD input
C1	ADVSS	P	AD GND
B8	PGND	P	Driver GND
B7	DGMISO	B	Digital Gyro SPI IF Data(I) / Digital Gyro I^{2}C IF Data(B)
B6	LDSTBB	I	LDO Standby (0 : Standby On, 1 : Standby Off)
B5	LDOPO	P	LDO Power supply out (Logic Core VDD (1.14V to 1.26V))
B4	SSB	I	SPI I/F Chip Select / VDD fix at I^{2}C i/f
B3	EPCSBIF2	B	EEPROM I/F
B2	DVSS	P	Logic GND
B1	GYYI	I	Gyro-Y AD input
A8	DGSSB	B	Digital Gyro SPI IF Chip Select(O) / inner signal monitor(O) / General-purpose IOPORT(B)
A7	DGINT	B	Digital Gyro SPI IF Data Busy(I) / inner signal monitor(O) / General-purpose IOPORT(B)
A6	DGSCLK	B	Digital Gyro SPI IF clock (O) / Digital Gyro I^{2}C IF clock(O) / HPS Control 1(O) / General-purpose IOPORT (B)
A5	DVDD30	P	Logic IO VDD (2.6V to 3.6V) and power supply to LDO
A4	MISO	O	SPI I/F Data / General-purpose IOPORT / inner signal monitor
A3	I2CCK	I	I^{2}C_IF clock / SPI IF clock
A2	I2CDT	B	I^{2}C_IF Data(B) / SPI IF Data
A1	HXI	I	Hall-X AD input

ORDERING INFORMATION

Device	Package	Shipping (Qty / Packing)
LC898111AXB-MH	WLCSP48, 3.22x2.57 (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