FXPS7250A4

Analog absolute pressure sensor, 20 to 250 kPa

Rev. 4.1 — 29 May 2019
Product data sheet

1 General description

The FXPS7250A4 high-performance, high-precision absolute pressure sensor consists of a compact capacitive micro-electro-mechanical systems (MEMS) device coupled with a digital integrated circuit (IC) producing a fully calibrated analog output.

This sensor is ideal for many automotive applications such as manifold air pressure (MAP), comfort seating and other applications requiring operating absolute pressure ranges up to 250 kPa.

The sensing element is based on NXP's high precision capacitive pressure cell technology. The architecture benefits from redundant pressure transducers as an expanded quality measure. It delivers highly accurate ratiometric analog readings of absolute pressure while operating from either a 3.3 V or 5.0 V power supply.

The sensor operates over a pressure range of 20 kPa to 250 kPa and over a wide temperature range of –40 ºC to 130 ºC

The sensor comes in an industry-leading 4 mm x 4 mm x 1.98 mm, restriction of hazardous substances (RoHS) compliant, high-power quad flat no-lead (HQFN) package[1] suitable for small printed circuit board (PCB) integration. Its AEC-Q100[2] compliance, high accuracy, reliable performance and high media resistivity make it ideal for use in automotive, industrial, and consumer applications.

2 Features and benefits

- Absolute pressure range: 20 to 250 kPa
- Operating temperature range: –40 °C to 130 °C
- Analog output for monitoring of the absolute pressure signal
- Pressure transducer and digital signal processor (DSP)
    - Internal self test
- Capacitance to voltage converter with anti-aliasing filter
- Sigma delta ADC plus sinc filter
- 800 Hz or 1000 Hz low-pass filter for absolute pressure
- Lead-free, 16-pin HQFN, 4 mm x 4 mm x 1.98 mm package

3 Applications

3.1 Automotive

- Manifold air pressure
    - MAP
- Small engine control
- Liquid propane gas (LPG) or compressed natural gas (CNG) engine management

3.2 Industrial

- Compressed air
- Manufacturing line control
- Gas metering
- Weather stations

3.3 Medical/Consumer

- Blood pressure monitor
- Medicine dispensing systems
- White goods

4   Ordering information

Table 1. Ordering information

Type number	Package		
	Name	**Description**	**Version**
FXPS7250A4	HQFN16	HQFN16, plastic, thermal enhanced quad flat pack; no leads; 16 terminals; 0.8 mm pitch; 4 mm x 4 mm x 1.98 mm body	SOT1573-1

4.1 Ordering options

Table 2. Ordering options

Device	Range (kPa)	Packing	Temperature range
FXPS7250A4T1	20 to 250 kPa	Packing Tape and Reel	–40 °C to 130 °C

5 Block diagram
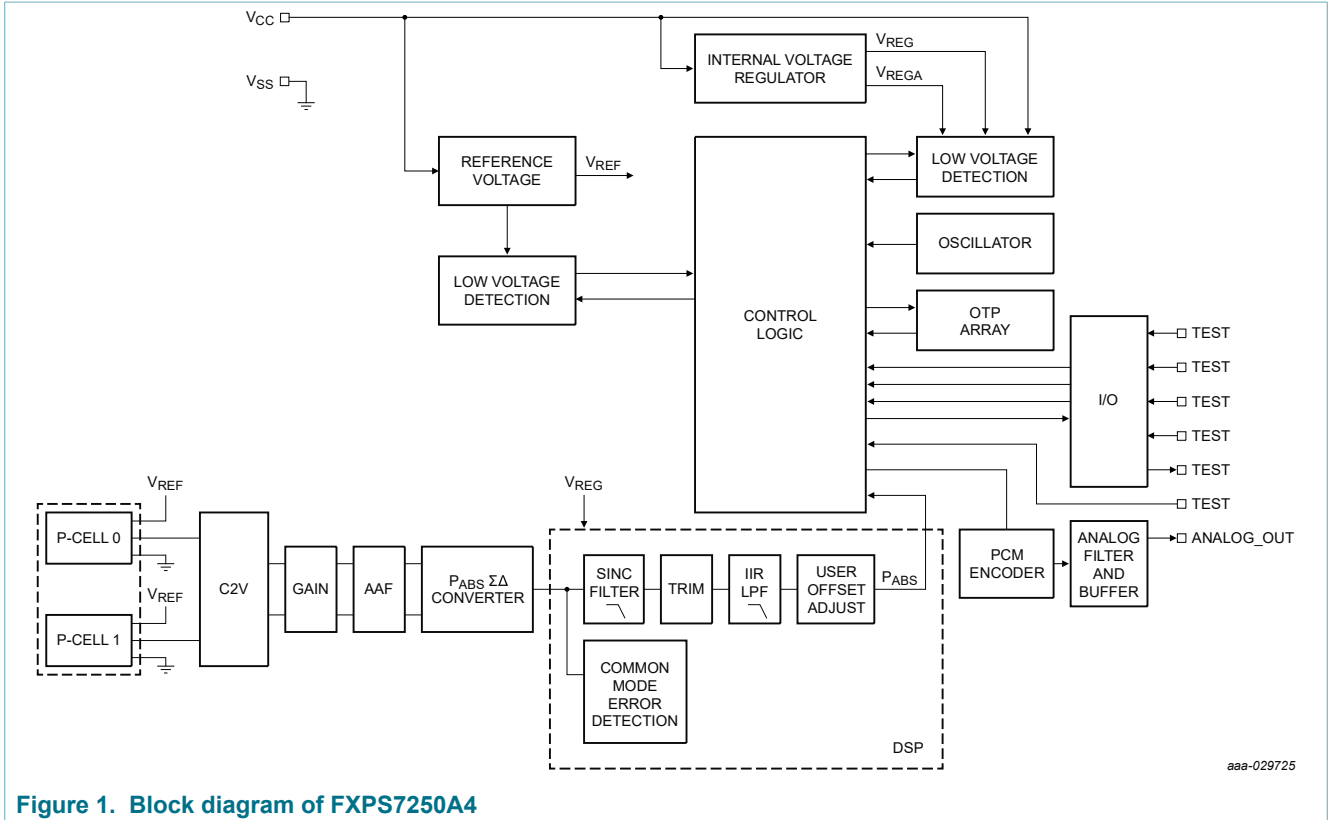
Figure 1. Block diagram of FXPS7250A4
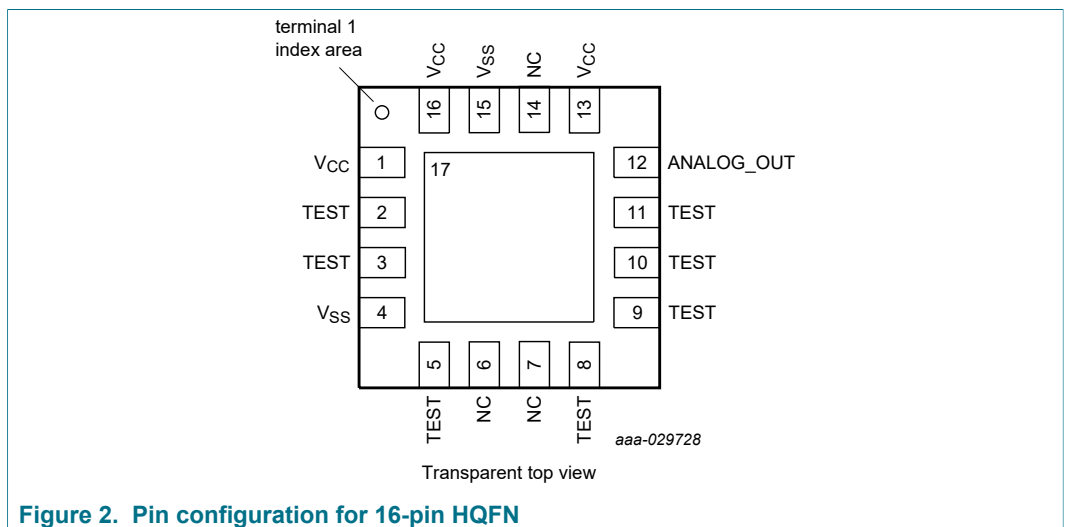
6 Pinning information

6.1 Pinning

Transparent top view

Figure 2. Pin configuration for 16-pin HQFN

FXPS7250A4

All information provided in this document is subject to legal disclaimers.

© NXP B.V. 2019. All rights reserved.

Product data sheet

Rev. 4.1 — 29 May 2019

3 / 22

6.2 Pin description

Table 3. Pin description

Pin	Pin name	Description
2, 5, 8, 9, 10, 11	TEST	Pins 2, 5, 8, 9, 10 and 11 are test pins and must be left unterminated in the application.
3	TEST	Pin 3 is required to be tied to V_{CC} for device operation.
4, 15	V_{SS}	Pins 4 and 15 are the supply return nodes and are connected internally to the die attach pad (pin 17).
6, 7, 14	NC	Pins 6, 7 and 14 are not internally connected and can be left unconnected in the application.
12	ANALOG_OUT	Pin 12 provides a ratiometric analog output proportional to the absolute pressure sensor data.
1, 13, 16	V_{CC}	Pins 1, 13 and 16 supply power to the device. An external capacitor must be connected between these pins and V_{SS}, as shown in the application diagram.
17	PAD	Pin 17 is the die attach flag and must be connected to V_{SS}.

7 Functional description

7.1 Voltage regulators

The device derives its internal supply voltage from the V_{CC} and V_{SS} pins. An external filter capacitor is required for V_{CC}, as shown in Figure 12.

A reference generator provides a reference voltage for the ΣΔ converter.

FXPS7250A4

Product data sheet

All information provided in this document is subject to legal disclaimers.

Rev. 4.1 — 29 May 2019
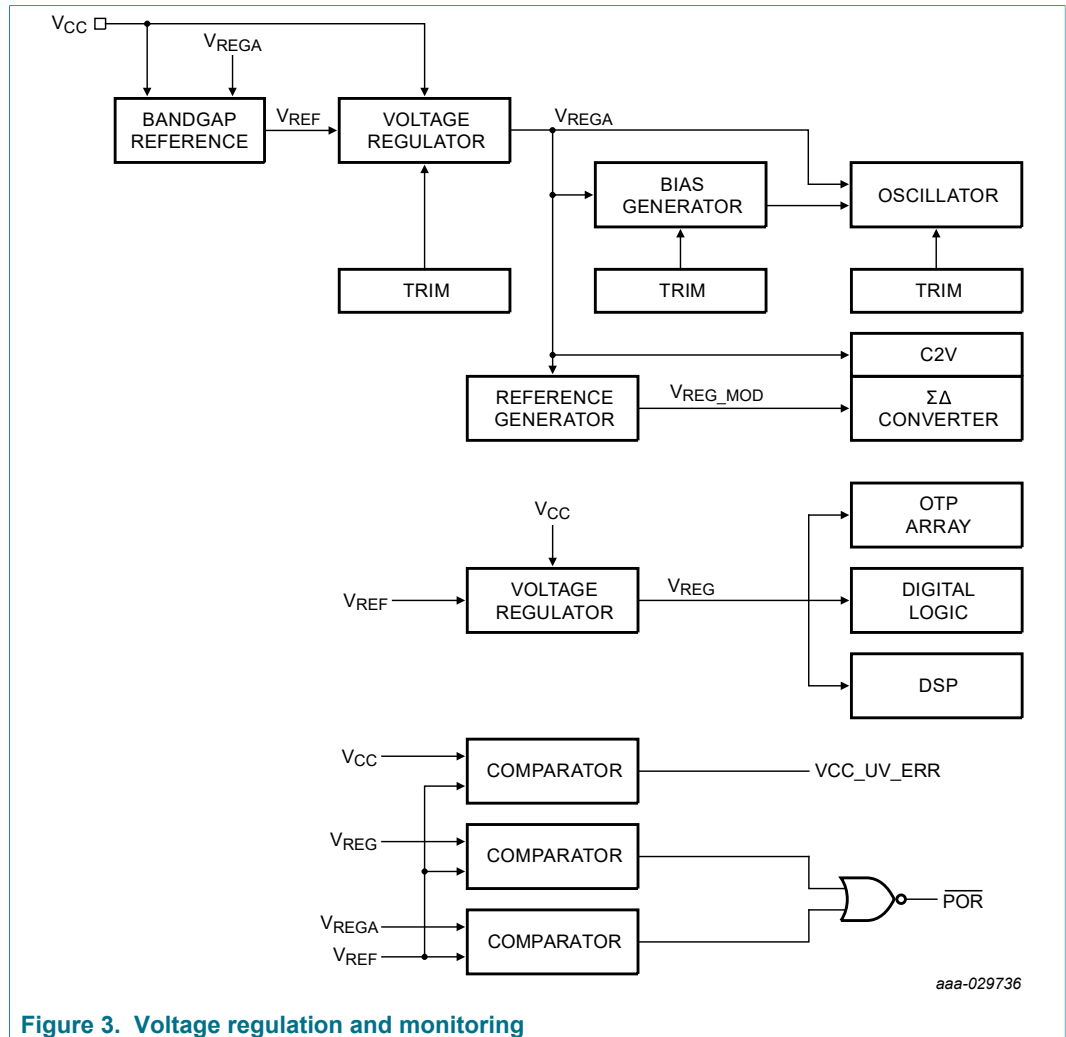
© NXP B.V. 2019. All rights reserved.

4 / 22

Figure 3. Voltage regulation and monitoring

7.2 Pressure sensor signal path

7.2.1 ΣΔ converter

A second order sigma delta modulator converts the voltage from the analog front end to a data stream that is input to the DSP. A simplified block diagram is shown in Figure 4.

FXPS7250A4
All information provided in this document is subject to legal disclaimers.
© NXP B.V. 2019. All rights reserved.

Product data sheet
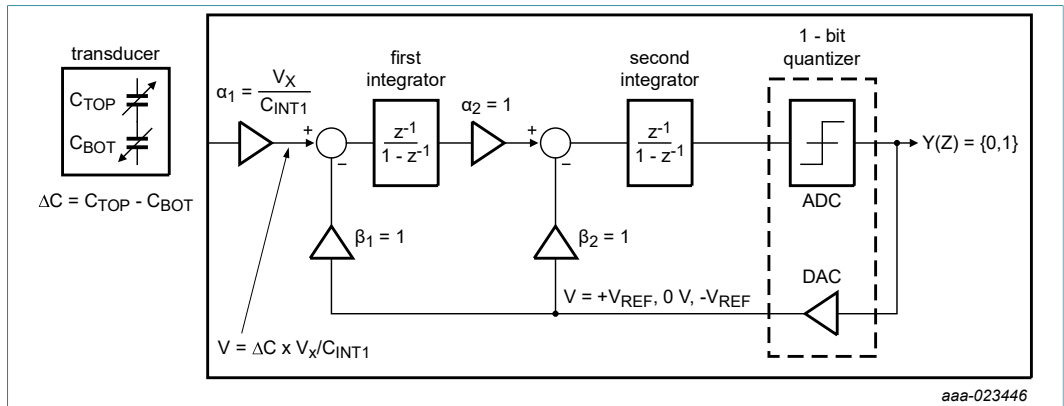**Rev. 4.1 — 29 May 2019**

5 / 22

Figure 4. ΣΔ converter block diagram

The sigma delta modulator operates at a frequency of 1 MHz, with the transfer function in Equation 1.

$$H(Z) = \frac{\alpha_1}{Z^2}$$

(1)

7.2.2 Digital signal processor (DSP)

A DSP is used to perform signal filtering and compensation. A diagram illustrating the signal processing flow within the DSP is shown in Figure 5.
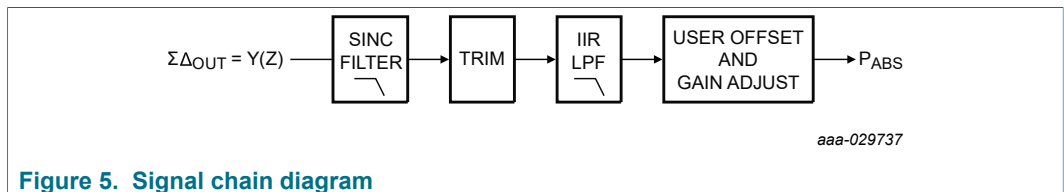

Figure 5. Signal chain diagram

7.2.2.1 Decimation sinc filter

In Equation 2, the output of the ΣΔ modulator is decimated and converted to a parallel value by two third-order sinc filters; the first with a decimation ratio of 24 and the second with a decimation ratio of 4.

$$H(Z) = \left(\frac{1}{24^3}\right) \times \left(\frac{1 - Z^{-24}}{1 - Z^{-1}}\right)^3 \quad H(Z) = \left(\frac{1}{4^3}\right) \times \left(\frac{1 - Z^{-4}}{1 - Z^{-1}}\right)^3$$
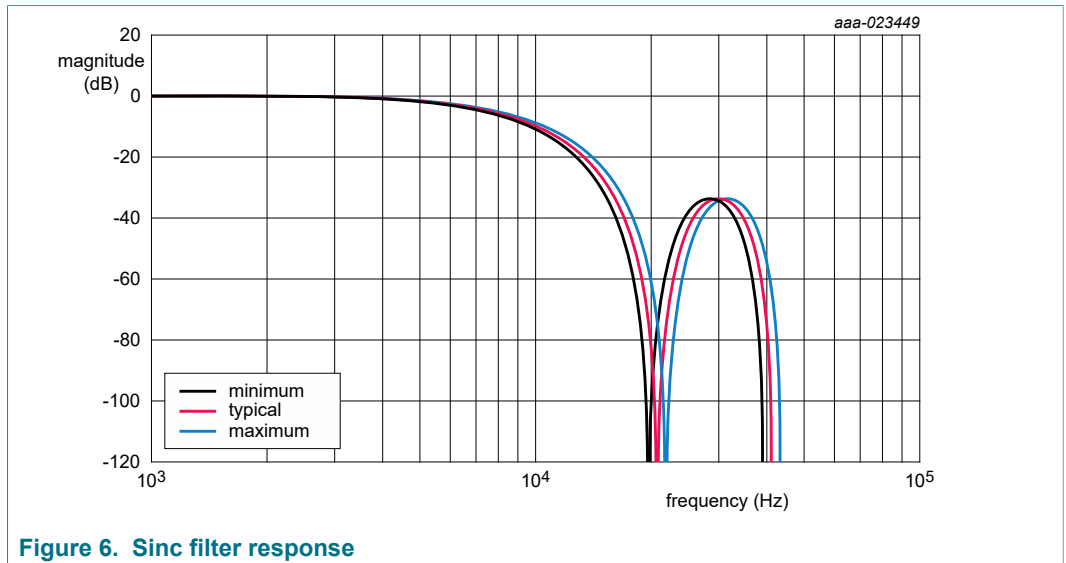
(2)

Figure 6. Sinc filter response

7.2.2.2 Signal trim and compensation

The device includes digital trim to compensate for sensor offset, sensitivity, and nonlinearity over temperature.

7.2.2.3 Low-pass filter

Data from the sinc filter is processed by an infinite impulse response (IIR) low-pass filter with the transfer function and coefficients shown in Equation 3.

$$H(Z) = a_0 \times \frac{(n_{11} \times z^0) + (n_{12} \times z^{-1}) + (n_{13} \times z^{-2})}{(d_{11} \times z^0) + (d_{12} \times z^{-1}) + (d_{13} \times z^{-2})} \times \frac{(n_{21} \times z^0) + (n_{22} \times z^{-1}) + (n_{23} \times z^{-2})}{(d_{21} \times z^0) + (d_{22} \times z^{-1}) + (d_{23} \times z^{-2})} \tag{3}$$

Table 4. IIR low pass filter coefficients

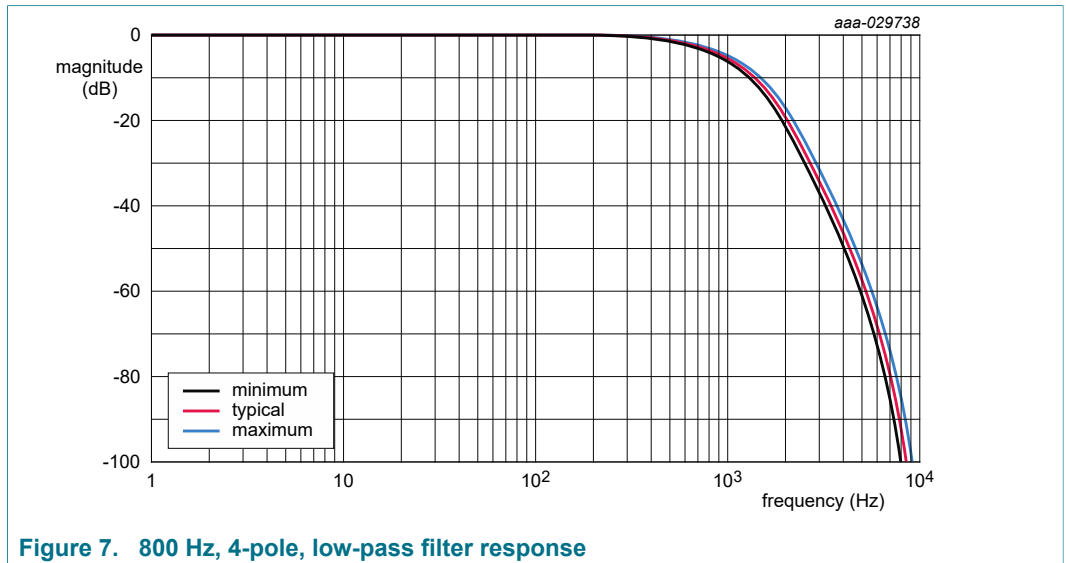| Filter number	Typical −3 dB frequency	Filter order	Filter coefficients (24 bit)				Group delay (µs)	Typical attenuation @ 1000 Hz (dB)
1	800 Hz	4	a_0	0.088642612609670	—	—	418	4.95
			n_{11}	0.029638050039039	d_{11}	1		
			n_{12}	0.087543281056143	d_{12}	−1.422792640957290		
			n_{13}	0.029695285913601	d_{13}	0.511435253566960		
			n_{21}	0.250241278804809	d_{21}	1		
			n_{22}	0.499999767379068	d_{22}	−1.503329908017845		
			n_{23}	0.249758953816089	d_{23}	0.621996524706640		
2	1000 Hz	4	a_0	0.129604264748411	—	—	333	2.99
			n_{11}	0.043719804402508	d_{11}	1		
			n_{12}	0.087543281056143	d_{12}	−1.300502656562698		
			n_{13}	0.043823599710731	d_{13}	0.430106921311110		
			n_{21}	0.250296586927511	d_{21}	1		
			n_{22}	0.499999648540934	d_{22}	−1.379959571988366		
			n_{23}	0.249703764531484	d_{23}	0.555046257157745		

Figure 7. 800 Hz, 4-pole, low-pass filter response
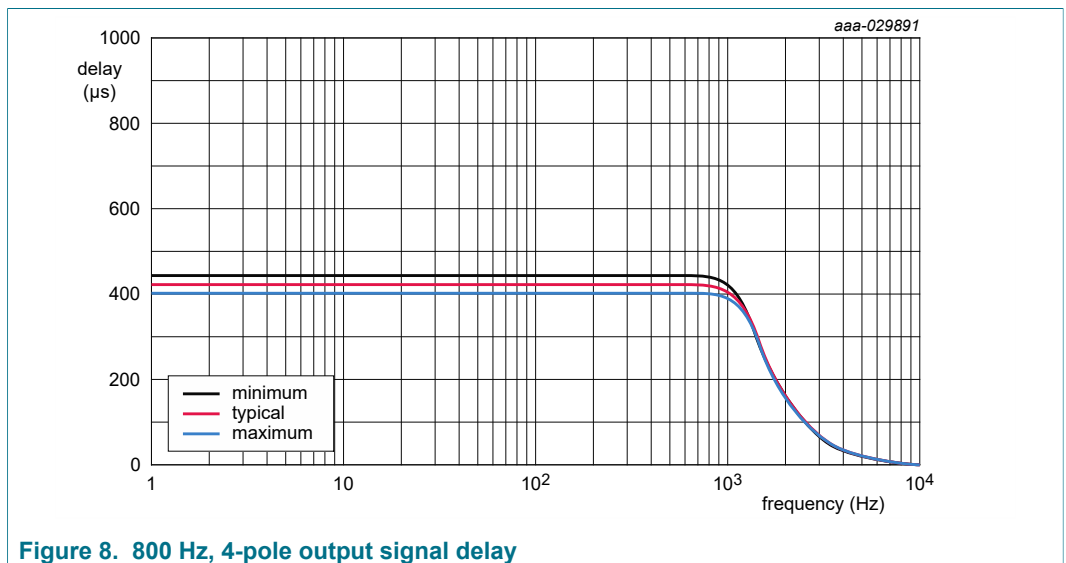
Figure 8. 800 Hz, 4-pole output signal delay

FXPS7250A4

All information provided in this document is subject to legal disclaimers.

© NXP B.V. 2019. All rights reserved.

Product data sheet

Rev. 4.1 — 29 May 2019

8 / 22

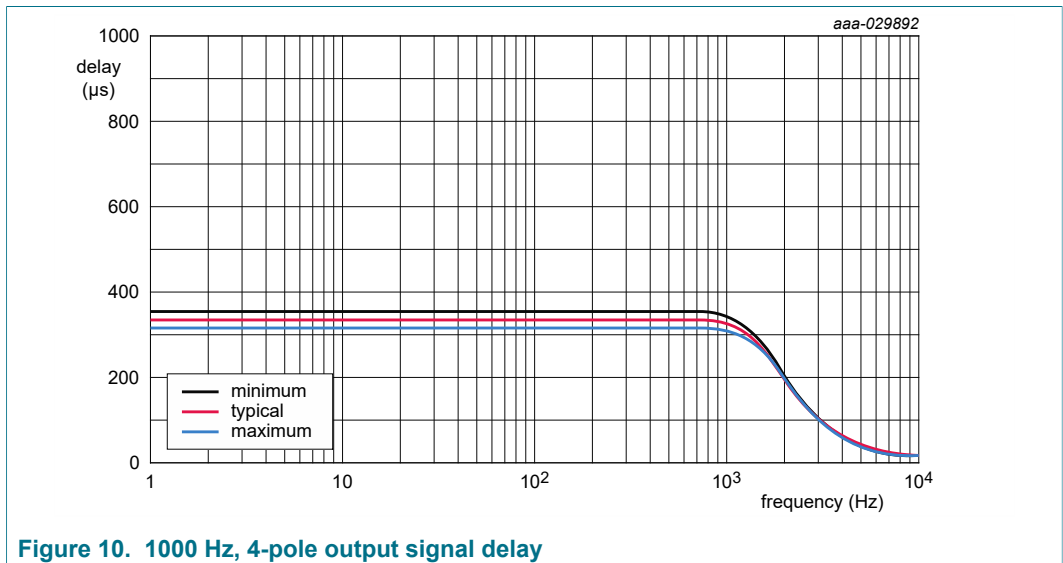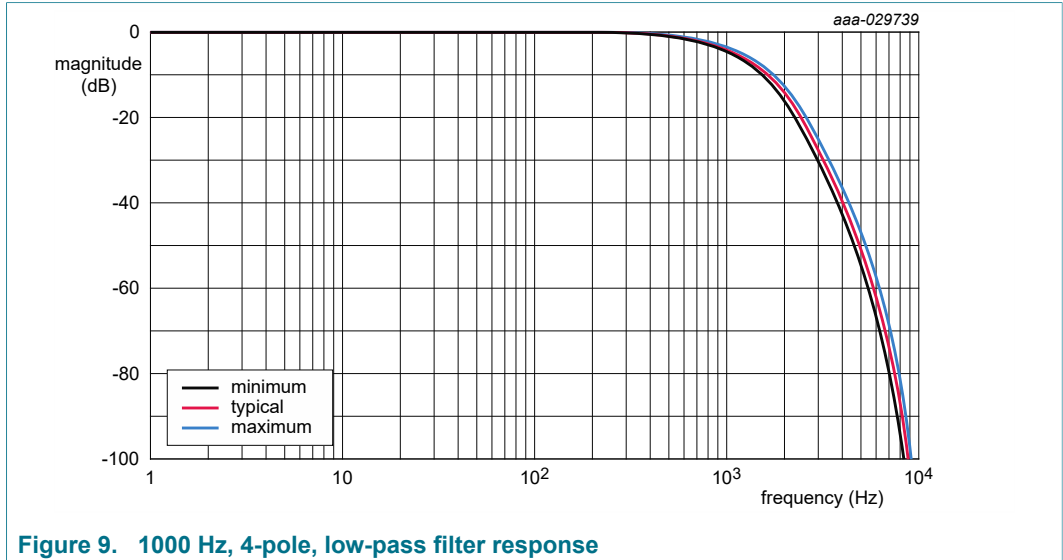**Figure 9.   1000 Hz, 4-pole, low-pass filter response**

Figure 10. 1000 Hz, 4-pole output signal delay

7.3 Analog output function

7.3.1 Analog output signal chain

The device provides an analog output ratiometric to the supply voltage. The analog output is enabled by default. Selecting the analog output enables the following functions:

- The non-interpolated P_{ABS} sensor data output is saturated to 10 bits and converted to an unsigned value.
- The 10-bit sensor value is input into a summer clocked at 10 MHz.
- The carry from the summer circuit generates a PCM output.
- The PCM signal is filtered by a 2-pole active low pass filter to generate an analog signal.

FXPS7250A4

All information provided in this document is subject to legal disclaimers.

© NXP B.V. 2019. All rights reserved.

Product data sheet

Rev. 4.1 — 29 May 2019

9 / 22

7.3.2 Analog output transfer function

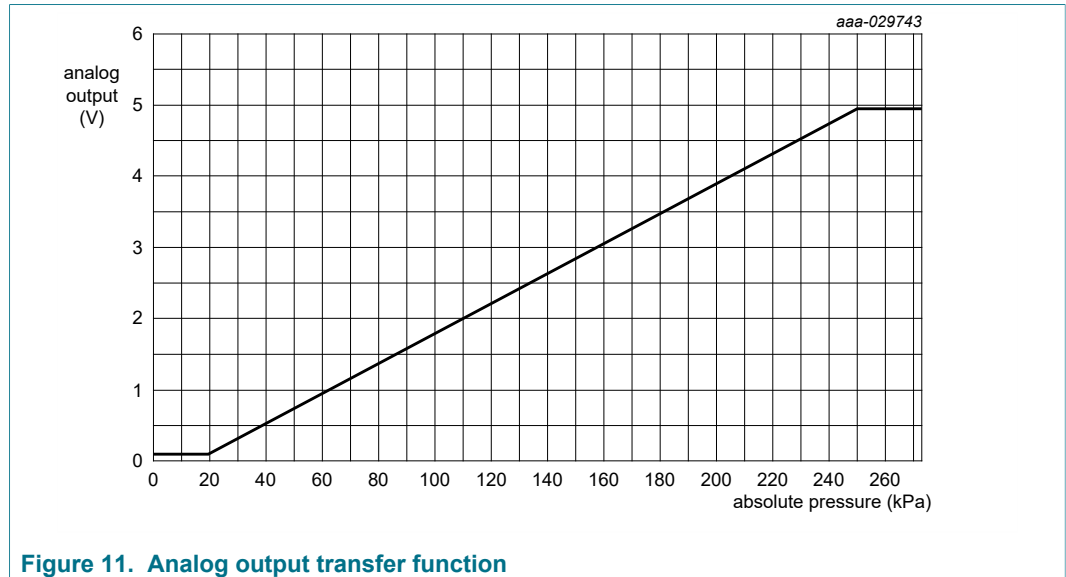The analog output transfer function for a 5.0 V supply is as shown in Figure 11.

Figure 11. Analog output transfer function

8   Maximum ratings

Absolute maximum ratings are the limits the device can be exposed to without permanently damaging it. Absolute maximum ratings are stress ratings only; functional operation at these ratings is not guaranteed. Exposure to absolute maximum ratings conditions for extended periods might affect device reliability.

This device contains circuitry to protect against damage due to high static voltage or electrical fields. NXP advises that normal precautions be taken to avoid application of any voltages higher than maximum-rated voltages to this high-impedance circuit.

Table 5. Maximum ratings

Symbol	Parameter	Conditions		Min	Max	Unit
VCC$_{MAX}$	Supply Voltage	V$_{CC}$, V$_{CCIO}$	[1]	—	+6.0	V
V$_{IOMAX}$	Input/Output Max on pins	ANALOG_OUT TESTx	[1]	–0.3	V$_{CC}$ + 0.3	V
h$_{DROP}$	Drop shock	To concrete, tile or steel surface, 10 drops, any orientation	[2]	—	1.2	m
T$_{stg}$	Temperature range	Storage	[2]	–40	+130	°C
T$_J$		Junction	[3]	–40	+150°C	°C
P$_{MAX}$	Maximum absolute pressure	Continuous	[3]	—	300	kPa
P$_{BURST}$		Burst (tested at 100 ms)	[2]	—	750	kPa
P$_{MIN}$	Minimum absolute pressure	Continuous	[1]	—	20	kPa
f$_{SEAL}$	Pressure sealing force	Applied to top face of package	[1]	—	10	N
θ$_{JA}$	Thermal resistance		[4]	—	120	°C/W
ESD and latch-up protection characteristics						
V$_{ESD}$	Electrostatic discharge (per AEC-Q100, Rev H)	Human body model (HBM)	[2]	–2000	2000	V
V$_{ESD}$		Charge device model (CDM)	[2] [5]	–500	500	V

[1]   Parameter verified by parametric and functional validation.

FXPS7250A4

All information provided in this document is subject to legal disclaimers.

© NXP B.V. 2019. All rights reserved.

Product data sheet

Rev. 4.1 — 29 May 2019

10 / 22

[2]   Parameter verified by qualification testing (Per AEC-Q100 Rev H or per NXP specification).
[3]   Functionality verified by modeling, simulation and/or design verification.
[4]   Thermal resistance provided with device mounted to a two-layer, 1.6 mm FR-4 PCB as documented in AN1902 with one signal layer and one ground layer.
[5]   CDM tested at ±750 V for corner pins and ±500 V for all other pins.

Caution
This device is sensitive to mechanical shock. Improper handling can cause permanent damage to the part.

Caution
This is an ESD sensitive device. Improper handling can cause permanent damage to the part.

msc896

9   Operating range

Table 6. Electrical characteristics—supply and I/O

$V_{CC\_min} \leq (V_{CC} - V_{SS}) \leq V_{CC\_max}$, $T_L \leq T_A \leq T_H$, $\Delta T \leq 25$ °C/min, unless otherwise specified.

Symbol	Parameter	Conditions		Min	Max	Units
V_{CC}	Supply voltage	Measured at V_{CC}	[1]	3.10	5.25	V
T_A	Operating temperature range	V_{CC} = 5.0 V, unless otherwise stated. Production tested operating temperature range	[1]	T_L –40	T_H +130	°C
T_A		Guaranteed operating temperature range	[1]	–40	+130	°C
V_{CC_RAMP}	Supply power on ramp rate		[2] [3]	0.00001	10	V/µs

[1]   Parameter tested 100 % at final test.
[2]   Functionality verified by modeling, simulation and/or design verification.
[3]   Parameter verified by parametric and functional validation.

10   Static characteristics

Table 7. Static characteristics

$V_{CC\_min} \leq (V_{CC} - V_{SS}) \leq V_{CC\_max}$, $T_L \leq T_A \leq T_H$, $\Delta T \leq 25$ °C/min, unless otherwise specified.

Symbol	Parameter	Condition		Min	Typ	Max	Units
Supply and I/O							
I_q	Quiescent supply current	V_{CC} = 5.0 V	[1]	—	—	8.0	mA
Temperature sensor signal chain							
V_{OH_ANA}	Output high voltage	ANALOG_OUT, I_{Load} = –100 µA	[1]	V_{cc} – 0.2	—	—	V
V_{OL_ANA}	Output low voltage	ANALOG_OUT, I_{Load} = 100 µA	[1]	—	—	0.2	V
V_{OUT_3dB}	Analog output low-pass filter frequency typical value	–3 dB, 2-pole	[2]	8	—	20	kHz
V_{OUT_3dBTol}	Analog output low-pass filter frequency typical tolerance	–3 dB, 2-pole	[2]	–5	—	5	%
Absolute pressure sensor signal chain							

Symbol	Parameter	Condition		Min	Typ	Max	Units
P_{ABS}	Absolute pressure range		[1] [3]	20	—	250	kPa
P_{SENS}	Absolute pressure output sensitivity	V_{CC} = 5.0 V. Tested at PA = 140 kPa ± 10 % and 200 kPa ± 10 %	[2]	—	20	—	mV/kPa
P_{ACC_HiT}	Absolute pressure accuracy	V_{CC} = 5.0 V. 85 °C < T_A ≤ 130 °C	[4]	-3	—	3	%FSS
P_{ACC_Typ}	Absolute pressure accuracy	V_{CC} = 5.0 V. 0° C ≤ T_A ≤ 85 °C	[4]	−2	—	+2	%FSS
P_{ACC_LoT}	Absolute pressure accuracy	V_{CC} = 5.0 V. −40 °C ≤ T_A< 0 °C	[4]	−3	—	+3	%FSS
P_{OFF}	Absolute pressure analog offset	At pressure span extremes V_{CC} = 5.0 V.	[4]	—	0.2	—	V
V_{FSS}	Output voltage span	At pressure span extremes V_{CC} = 5.0 V.	[5]	—	4.6	—	V

[1]   Parameter verified by pass/fail testing at final test.
[2]   Functionality verified by modeling, simulation and/or design verification.
[3]   Parameter verified by characterization.
[4]   Parameter tested 100 % at final test.
[5]   Parameter verified by functional evaluation.

11 Dynamic characteristics

Table 8. Dynamic characteristics
V_{CC_min} ≤ $(V_{CC} − V_{SS})$ ≤ V_{CC_max}, T_L ≤ T_A ≤ T_H, ΔT ≤ 25 °C/min, unless otherwise specified.

Symbol	Parameter	Condition		Min	Typ	Max	Units
Signal chain							
$t_{SigChain}$	P_{ABS} low-pass filter	Signal chain sample time	[1]	—	48	—	µs
f_{c0}		Cutoff frequency, filter option #0, 4-pole	[1] [2]	—	800	—	Hz
f_{c1}		Cutoff frequency, filter option #1, 4-pole	[1] [2]	—	1000	—	Hz
$t_{SigDelay}$	Signal delay (sinc filter to output delay, excluding the P_{ABS} LPF)		[1]	—	—	128	µs
$f_{Package}$	Package resonance frequency		[1]	27.1	—	—	kHz

[1]   Functionality verified by modeling, simulation and/or design verification.
[2]   Parameter verified by functional evaluation.

12 Media compatibility—pressure sensors only

For more information regarding media compatibility information, contact your local sales representative.

13 Application information

Note: A gel is used to provide media protection against corrosive elements which may otherwise damage metal bond wires and/or IC surfaces. Highly pressurized gas molecules may permeate through the gel and then occupy boundaries between material surfaces within the sensor package. When decompression occurs, the gas molecules may collect, form bubbles and possibly result in delamination of the gel from the material it protects. If a bubble is located on the pressure transducer surface or on the bond wires, the sensor measurement may shift from its calibrated transfer function. In some cases,

FXPS7250A4

Product data sheet

All information provided in this document is subject to legal disclaimers.

© NXP B.V. 2019. All rights reserved.

Rev. 4.1 — 29 May 2019

12 / 22

these temporary shifts could be outside the tolerances listed in the data sheet. In rare cases, the bubble may bend the bond wires and result in a permanent shift.
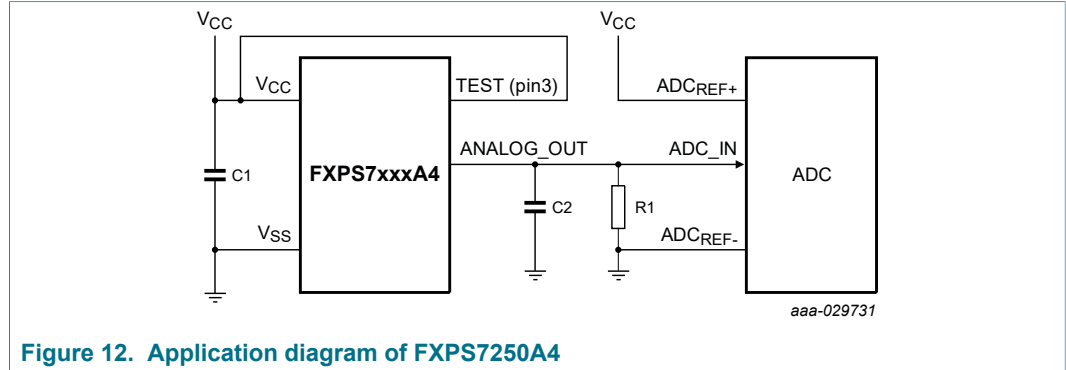

Figure 12. Application diagram of FXPS7250A4

Table 9. External component recommendations

Name	Type	Description	Purpose
C1	Ceramic	0.1 µF, 10 %, 10 V minimum, X7R	V_{CC} power supply decoupling
C2	Ceramic	47 pF, 10 %, 10 V minimum, X7R	Analog output filtering
R1	General purpose	51 kΩ, 5 %, 200 PPM	Analog output pull-down resistor

FXPS7250A4

Product data sheet

Rev. 4.1 — 29 May 2019

13 / 22
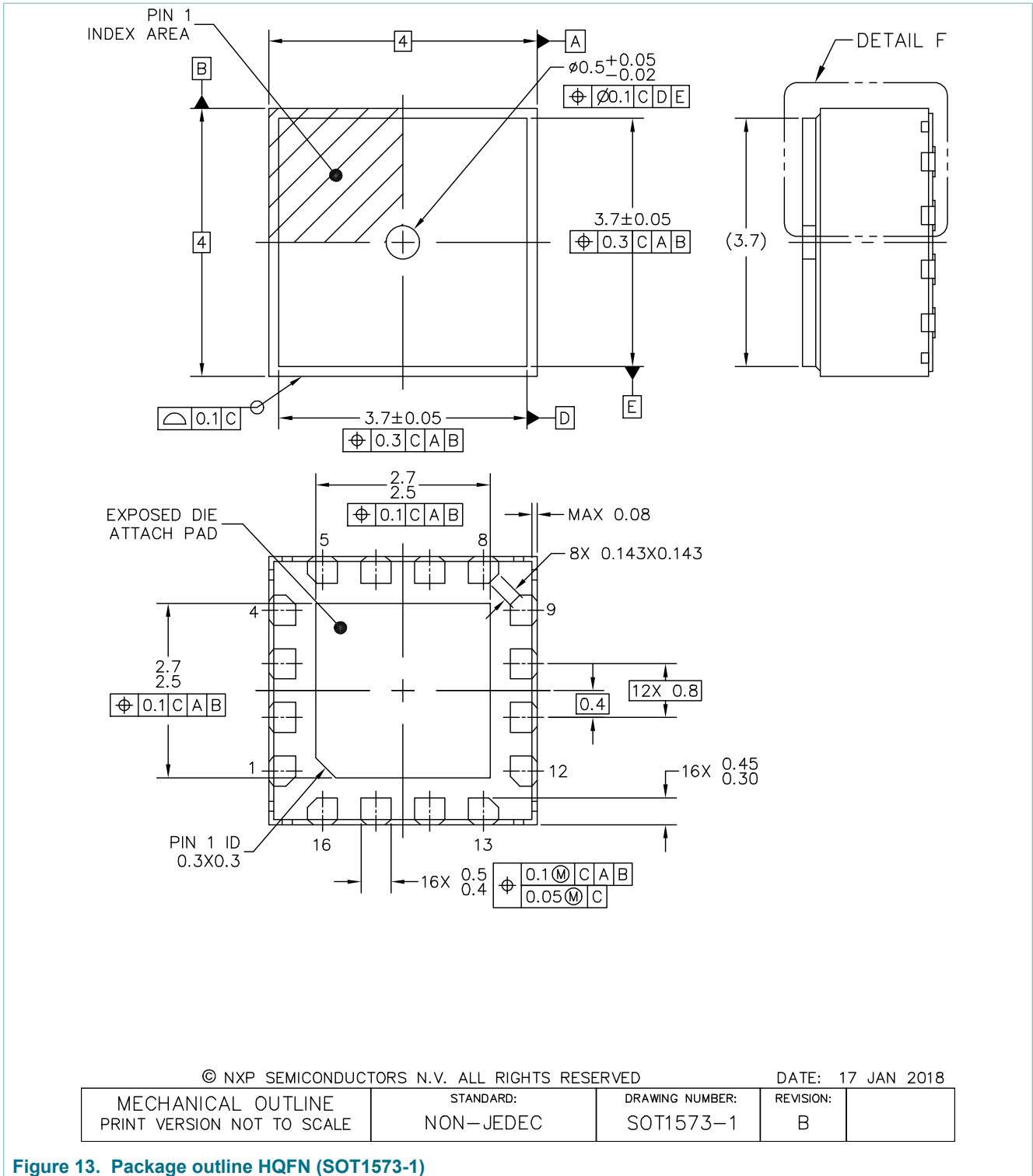
14 Package outline

Figure 13. Package outline HQFN (SOT1573-1)

2.08
1.88

1.507

(0.2)

16X
[⌒ 0.08 C] △3

(0.203)

MIN 0.09

△4 0.05
0.00

(0.8)

(0.45)

C

SEATING PLANE

DETAIL F
VIEW ROTATED 90°CW

DATE: 17 JAN 2018

MECHANICAL OUTLINE PRINT VERSION NOT TO SCALE	STANDARD: NON-JEDEC	DRAWING NUMBER: SOT1573-1	REVISION: B	

Figure 14. Package outline detail HQFN (SOT1573-1)

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.

2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M−1994.

3. COPLANARITY APPLIES TO LEADS AND DIE ATTACH PAD.

4. DIMENSION APPLIES ONLY FOR TERMINALS.

5. MIN METAL GAP SHOULD BE 0.2 MM.

© NXP SEMICONDUCTORS N.V. ALL RIGHTS RESERVED   DATE: 17 JAN 2018

MECHANICAL OUTLINE PRINT VERSION NOT TO SCALE	STANDARD: NON−JEDEC	DRAWING NUMBER: SOT1573−1	REVISION: B	

Figure 15. Package outline note HQFN (SOT1573-1)

15 References

[1] **Assembly guidelines for quad flat no-lead (HQFN) and small outline no-lead (SON) packages** — NXP Application Note (AN) 1902, Rev. 8.0 - 6 February 2018, 51 pages, https://www.nxp.com/docs/en/application-note/AN1902.pdf

[2] **AEC documents on Automotive Electronics Council Component Technical Committee's site:** http://www.aecouncil.com/AECDocuments.html

FXPS7250A4

All information provided in this document is subject to legal disclaimers.

© NXP B.V. 2019. All rights reserved.

Product data sheet **Rev. 4.1 — 29 May 2019**

17 / 22

16 Revision history

Table 10. Revision history

Document ID	Release date	Data sheet status	Change notice	Supercedes
FXPS7250A4 v.4.1	20190529	Product data sheet	-	FXPS7250A4 v.4
Modifications	• Section 13, Figure 12: Revised the symbol for R1 from a capacitor symbol to a resistor symbol.			
FXPS7250A4 v.4	20190507	Product data sheet	-	FXPS7250A4 v.3
FXPS7250A4 v.3	20190506	Preliminary data sheet	-	FXPS7250A4 v.2
FXPS7250A4 v.2	20190408	Preliminary data sheet	-	FXPS7250A4 v.1
FXPS7250A4 v.1	20180913	Preliminary data sheet	-	-

FXPS7250A4

All information provided in this document is subject to legal disclaimers.

© NXP B.V. 2019. All rights reserved.

Product data sheet

Rev. 4.1 — 29 May 2019

18 / 22

17 Legal information

17.1 Data sheet status

Document status[1][2]	Product status[3]	Definition
Objective [short] data sheet	Development	This document contains data from the objective specification for product development.
Preliminary [short] data sheet	Qualification	This document contains data from the preliminary specification.
Product [short] data sheet	Production	This document contains the product specification.

[1] Please consult the most recently issued document before initiating or completing a design.

[2] The term 'short data sheet' is explained in section "Definitions".

[3] The product status of device(s) described in this document may have changed since this document was published and may differ in case of multiple devices. The latest product status information is available on the Internet at URL http://www.nxp.com.

17.2 Definitions

Draft — The document is a draft version only. The content is still under internal review and subject to formal approval, which may result in modifications or additions. NXP Semiconductors does not give any representations or warranties as to the accuracy or completeness of information included herein and shall have no liability for the consequences of use of such information.

Short data sheet — A short data sheet is an extract from a full data sheet with the same product type number(s) and title. A short data sheet is intended for quick reference only and should not be relied upon to contain detailed and full information. For detailed and full information see the relevant full data sheet, which is available on request via the local NXP Semiconductors sales office. In case of any inconsistency or conflict with the short data sheet, the full data sheet shall prevail.

Product specification — The information and data provided in a Product data sheet shall define the specification of the product as agreed between NXP Semiconductors and its customer, unless NXP Semiconductors and customer have explicitly agreed otherwise in writing. In no event however, shall an agreement be valid in which the NXP Semiconductors product is deemed to offer functions and qualities beyond those described in the Product data sheet.

17.3 Disclaimers

Limited warranty and liability — Information in this document is believed to be accurate and reliable. However, NXP Semiconductors does not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information. NXP Semiconductors takes no responsibility for the content in this document if provided by an information source outside of NXP Semiconductors. In no event shall NXP Semiconductors be liable for any indirect, incidental, punitive, special or consequential damages (including - without limitation - lost profits, lost savings, business interruption, costs related to the removal or replacement of any products or rework charges) whether or not such damages are based on tort (including negligence), warranty, breach of contract or any other legal theory. Notwithstanding any damages that customer might incur for any reason whatsoever, NXP Semiconductors' aggregate and cumulative liability towards customer for the products described herein shall be limited in accordance with the Terms and conditions of commercial sale of NXP Semiconductors.

Right to make changes — NXP Semiconductors reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without

notice. This document supersedes and replaces all information supplied prior to the publication hereof.

Applications — Applications that are described herein for any of these products are for illustrative purposes only. NXP Semiconductors makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification. Customers are responsible for the design and operation of their applications and products using NXP Semiconductors products, and NXP Semiconductors accepts no liability for any assistance with applications or customer product design. It is customer's sole responsibility to determine whether the NXP Semiconductors product is suitable and fit for the customer's applications and products planned, as well as for the planned application and use of customer's third party customer(s). Customers should provide appropriate design and operating safeguards to minimize the risks associated with their applications and products. NXP Semiconductors does not accept any liability related to any default, damage, costs or problem which is based on any weakness or default in the customer's applications or products, or the application or use by customer's third party customer(s). Customer is responsible for doing all necessary testing for the customer's applications and products using NXP Semiconductors products in order to avoid a default of the applications and the products or of the application or use by customer's third party customer(s). NXP does not accept any liability in this respect.

Limiting values — Stress above one or more limiting values (as defined in the Absolute Maximum Ratings System of IEC 60134) will cause permanent damage to the device. Limiting values are stress ratings only and (proper) operation of the device at these or any other conditions above those given in the Recommended operating conditions section (if present) or the Characteristics sections of this document is not warranted. Constant or repeated exposure to limiting values will permanently and irreversibly affect the quality and reliability of the device.

Terms and conditions of commercial sale — NXP Semiconductors products are sold subject to the general terms and conditions of commercial sale, as published at http://www.nxp.com/profile/terms, unless otherwise agreed in a valid written individual agreement. In case an individual agreement is concluded only the terms and conditions of the respective agreement shall apply. NXP Semiconductors hereby expressly objects to applying the customer's general terms and conditions with regard to the purchase of NXP Semiconductors products by customer.

No offer to sell or license — Nothing in this document may be interpreted or construed as an offer to sell products that is open for acceptance or the grant, conveyance or implication of any license under any copyrights, patents or other industrial or intellectual property rights.

Suitability for use in automotive applications — This NXP Semiconductors product has been qualified for use in automotive applications. Unless otherwise agreed in writing, the product is not designed, authorized or warranted to be suitable for use in life support, life-critical or safety-critical systems or equipment, nor in applications where failure or malfunction of an NXP Semiconductors product can reasonably be expected

FXPS7250A4

All information provided in this document is subject to legal disclaimers.

© NXP B.V. 2019. All rights reserved.

Product data sheet

Rev. 4.1 — 29 May 2019

19 / 22

to result in personal injury, death or severe property or environmental damage. NXP Semiconductors and its suppliers accept no liability for inclusion and/or use of NXP Semiconductors products in such equipment or applications and therefore such inclusion and/or use is at the customer's own risk.

Export control — This document as well as the item(s) described herein may be subject to export control regulations. Export might require a prior authorization from competent authorities.

Translations — A non-English (translated) version of a document is for reference only. The English version shall prevail in case of any discrepancy between the translated and English versions.

17.4 Trademarks

Notice: All referenced brands, product names, service names and trademarks are the property of their respective owners.

NXP — is a trademark of NXP B.V.

FXPS7250A4

All information provided in this document is subject to legal disclaimers.

© NXP B.V. 2019. All rights reserved.

Product data sheet

Rev. 4.1 — 29 May 2019

20 / 22

Tables

Figures

FXPS7250A4

All information provided in this document is subject to legal disclaimers.

© NXP B.V. 2019. All rights reserved.

Product data sheet

Rev. 4.1 — 29 May 2019

21 / 22

Contents