

Product Document



Analog Frontend for Vital Sign Monitoring

ams.com/AS7050

ams.com/AS7056

ams.com/AS7057

- High flexibility due to large amount of input and outputs
- Medical Grade ECG (IEC 60601-2-47)
- 19 bit ADC for ECG and PPG acquisition
- Low power driving mode
- Digital on-chip data processing

Sensing is life

ams OSRAM

AS705x family

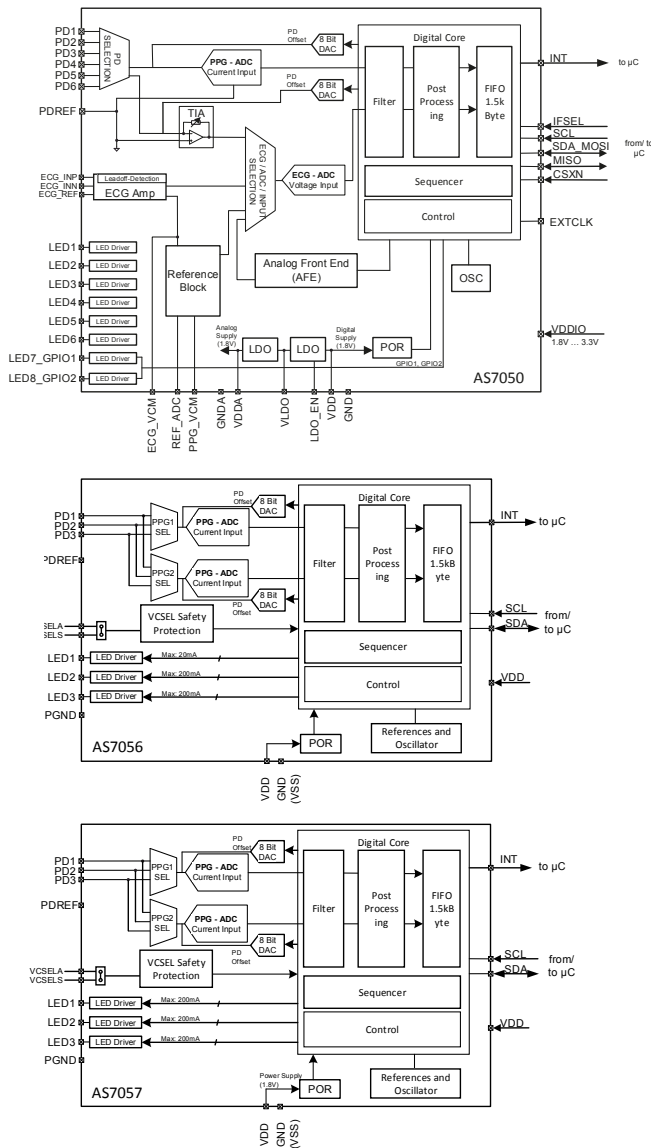
Analog Frontend for Vital Sign Monitoring

General Description

The AS7050 is the first biosignal sensor in the new product family, which allows the end user to capture biosignals such as heart rate measurement (HRM) and galvanic skin resistance (GSR). Thanks to two ADC channels, photoplethysmogram (PPG) and electrocardiogram (ECG) measurements can be performed simultaneously, with embedded ECG low noise analog front end.

For customers which are not interested in using ECG or looking for a small size optical setup, the AS705x family also including two small size products, AS7056 and AS7057.

Block Diagrams



ams.com/vital-sign-sensing

Features

- Multiple LED Driver /VCSEL Driver and photodiode input pins available
- Smallest wafer level chip scale package on the market
- Synchronized PPG and ECG* channels
- Low noise analog optical front-end

Benefits

- Flexible system design with newest emitter technology possible
- Allows to designed small vital sign system
- ECG with dry electrodes*
- Good HRM measurement quality
- Enables blood pressure measurement
- Acquiring several vital sign signals in parallel (HRM, HRV, SpO2, ECG)
- Enables proximity detection for additional energy savings
- Prolonging the operating time

Applications

- Hearables
- Fitness band
- Smart watch
- Smart patches
- Heart rate monitor
- Cuff-less optical blood pressure measurements
- ECG monitoring*

Ordering Information

Ordering Code	Package	Delivery Form	Delivery Qty. [pcs/reel]
AS7050-BWLM	WLCSPP	Tape & Reel	500
AS7050-BWLT			10 000
AS7056-BWLM			500
AS7056-BWLT			10 000
AS7057-BWLM			500
AS7057-BWLT			10 000

* only applicable for AS7050

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