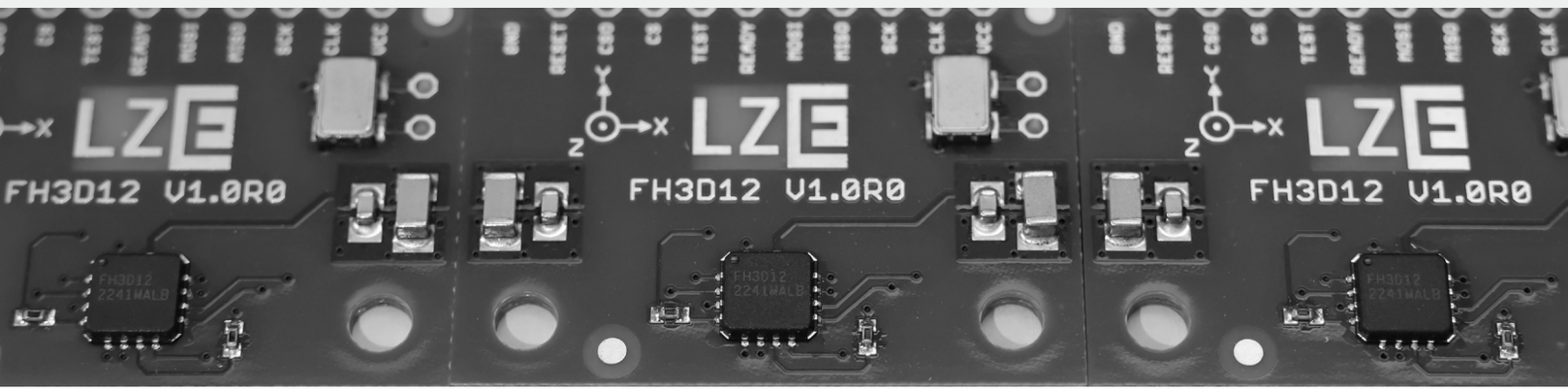
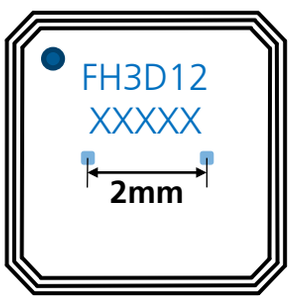
Leistungszentrum Elektroniksysteme





1 *FH3D12 punched MLF 5x5x0.9mm with 0.8mm pitch*

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SCAN ME

FH3D12

Software Defined Dual 3D Hall Sensor

General Description

The FH3D12 is a dual 3D Hall sensor based on Fraunhofer HallinOne® technology.
This versatile magnetic field sensor uses pure Hall effect principle without magnetizable materials.
FH3D12 offers high dynamic magnetic range and accurate 3D magnetic field measurement at two positions with a planar IC in a punched MLF-16 5x5x0.9mm with 0.8mm pitch.
Supports stray field robust applications by using magnetic field gradients.

Applications

- 3D position measurement (Joystick)
- Current sensing
- Linear position measurement (axial/orthogonal and axial/parallel)
- Angular measurement (on-axis and off-axis)
- Magnetic field mapping

Features

- Dual 3D Hall-Sensor with 2mm pitch
- Measurement range full scale from ~10mT up to ~1.5T
- Measurement rate up to 20kHz at 12Bit or 1.8kHz at 16Bit resolution
- Supply voltage 3.0V…3.6V
- Temperature range -40°C … 125°C
- Temperature sensor for system-level drift tracking
- Software defined sensor:
  - each sensor element can be independently configured concerning measurement range and rate
  - Measurement flow (active sensor elements and measurement order)
- Integrated excitation coils
  - Magnetic calibration without need for magnetic setup
  - Magnetic self test during operation
- Diagnostic features for fault detection
- SPI interface