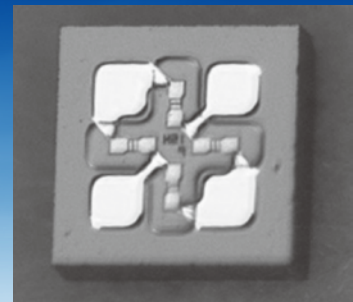


Nano-granular TMR type magnetic sensors

Hseries



H series is the bare chip magnetic sensor in which the nano-granular TMR elements are arranged into full bridge circuit.

The difference of few magnetic fields of small and minute space is detectable.

Because of high resistance, consumption current is very small and the best for mobile use.

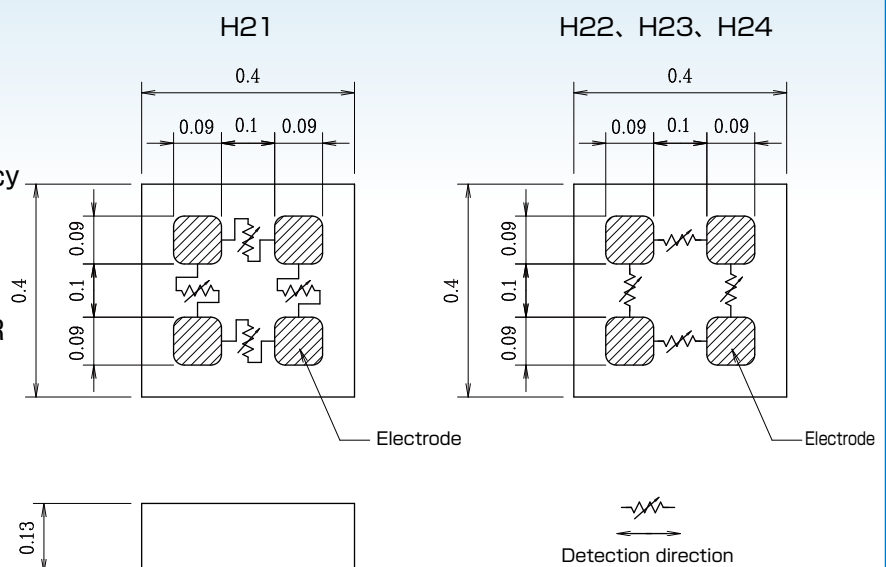
Features

- High output voltage
- High sensitivity
- Minute size
- Low power consumption
- Low temperature dependency
- Low hysteresis

Structure

- Sensor : nano-granular TMR (Full bridge circuit)
- Substrate : Si
- Electrode : Au

Outside dimension (mm)



Applications

- Encoder
- Linear scale
- Current sensor
- Compass
- Bill acceptor, etc

Electro-magnetic specification

Supply voltage, V_{CC}	1~5 V
Absolute maximum rating, V_{CC}	10 V
Output voltage, V_{out}	350 mV _{pp} (Min) (in the case of $V_{CC}=5$ V, rotation magnetic field $H=H_k$, and differential output $V_{out1}-V_{out2}$)
Offset voltage, V_{off}	150 mV (Max)
ESD voltage	100 V (Typ, human body mode)
Temperature range	-40 °C~125 °C

H-series Line-up

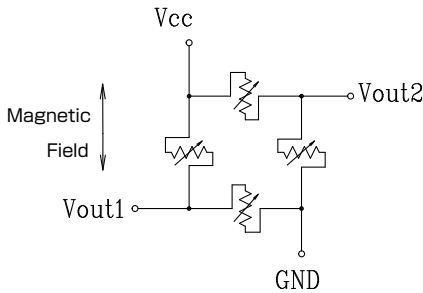
Model No.	Resistance (without field)	Effective magnetic field, H_k
H21	500 k Ω	± 8 kA/m (100 Oe)
H22	500 k Ω	± 16 kA/m (200 Oe)
H23	500 k Ω	± 24 kA/m (300 Oe)
H24	500 k Ω	± 48 kA/m (600 Oe)

Nano-granular TMR type magnetic sensors, Hseries

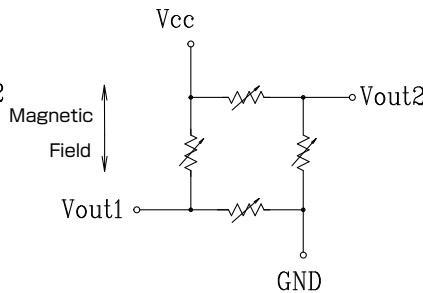
Output voltage characteristic

- The vertical axis shows the differential output ($V_{out1} - V_{out2}$) at the supply voltage (V_{cc}) of 5 V.
- The magnetic field was applied along the direction of the arrow.

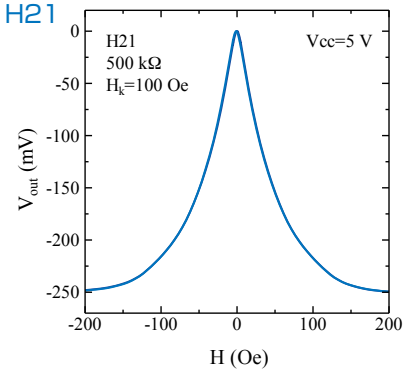
H21



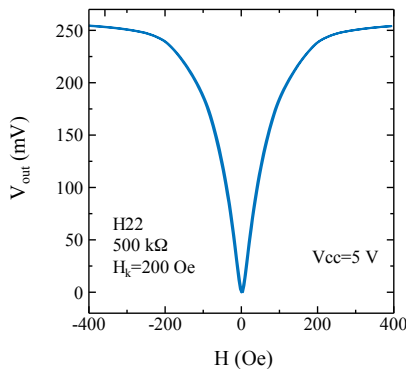
H22, H23, H24



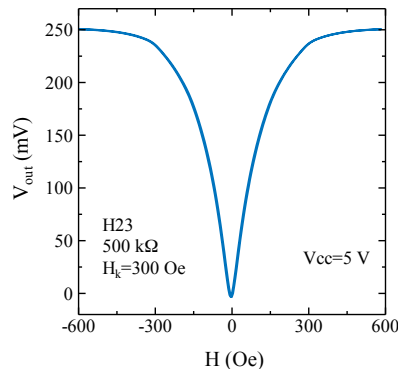
H21



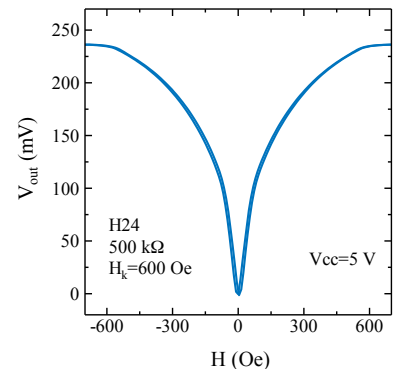
H22



H23

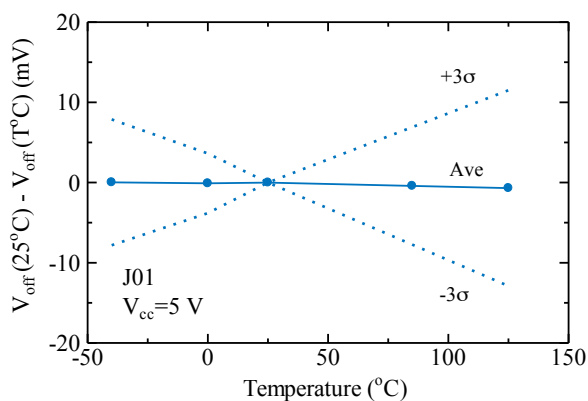


H24

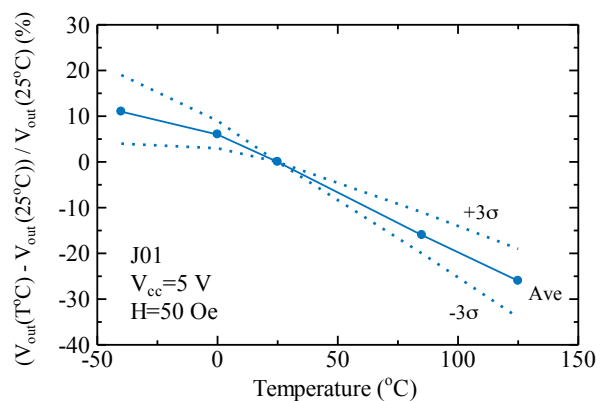


Temperature characteristics (reference data of J-series)

Offset voltage



Output voltage



※This catalogue was compiled in July 2013. All items listed in the catalogue are subject to change without any prior notice.

Products listed in this catalogue are manufactured for use in standard applications (eg: household appliances, OA/AV, Telecommunications, measurement instruments). Please do not use the products in critical reliability and security applications (eg: space and aviation, critical-safety transport applications, nuclear power control, medical, life-supporting units and equipment).

Inquire



New Business Development Division

9, Takiharu-cho, Minami-ku, Nagoya, JAPAN 457-8712

Tel: +81-52-308-4991 FAX: +81-52-613-6914

<http://www.daido.co.jp/en/products/sensor/>