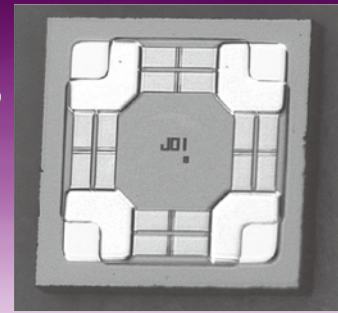


# MICRO INDUCTIVE

## Nano-granular TMR type magnetic sensors

### Jseries



J series is the bare chip magnetic sensor in which the nano-granular TMR elements are arranged into full bridge circuit. It shows excellent performance in various applications.

#### Features

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

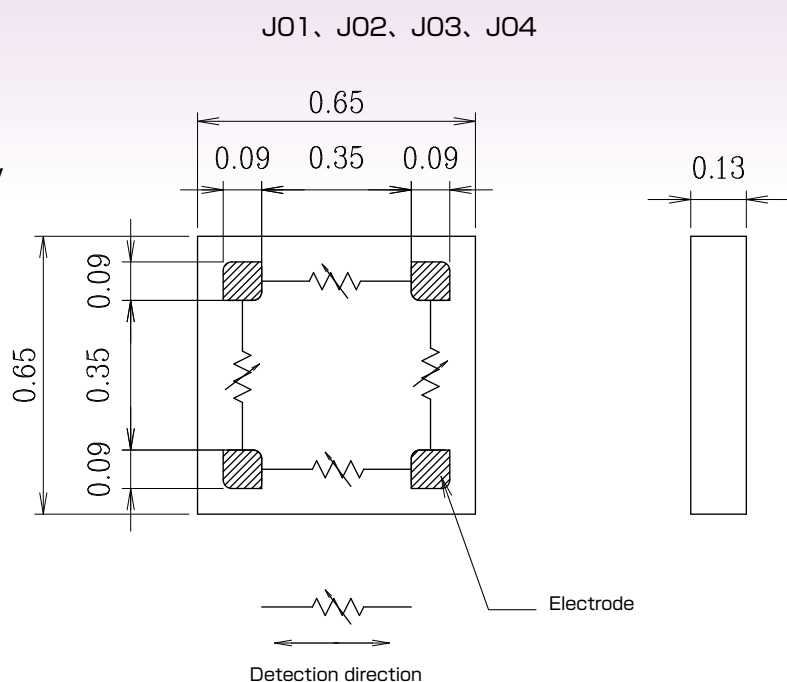
#### Structure

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

#### Applications

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

#### Outside dimension (mm)



#### Electro-magnetic specification

Supply voltage, $V_{cc}$	1~5 V
Absolute maximum rating, $V_{cc}$	10 V
Output voltage, $V_{out}$	350 mV <sub>pp</sub> (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

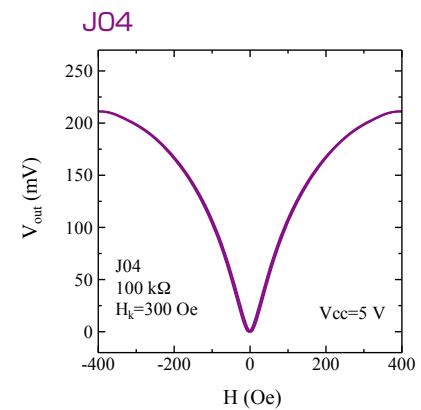
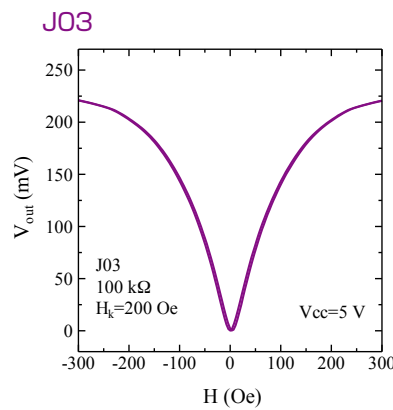
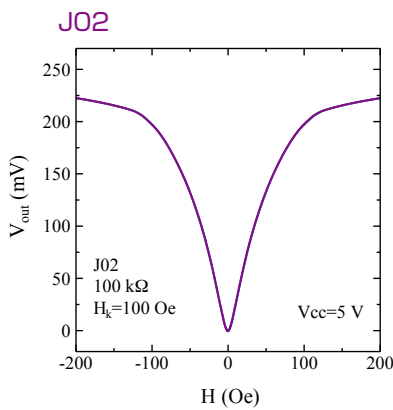
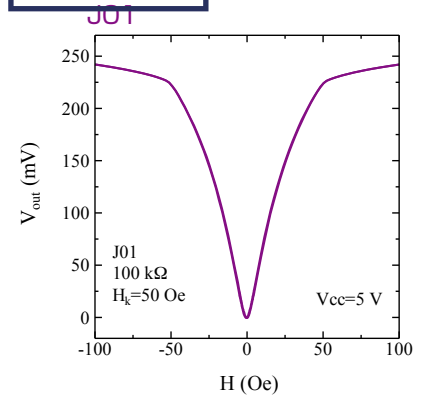
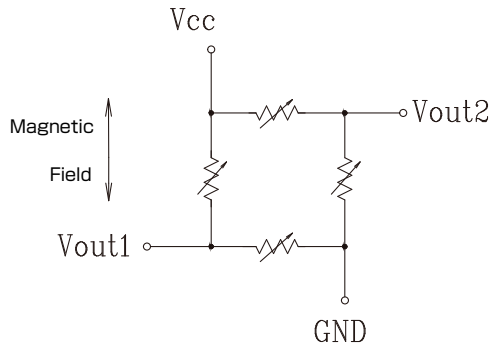
#### J-series line-up

Model No.	Resistance (without field)	Effective magnetic field, $H_k$
J01	100 k $\Omega$	$\pm 4$ kA/m (50 Oe)
J02	100 k $\Omega$	$\pm 8$ kA/m (100 Oe)
J03	100 k $\Omega$	$\pm 16$ kA/m (200 Oe)
J04	100 k $\Omega$	$\pm 24$ kA/m (300 Oe)

# Nano-granular TMR type magnetic sensors, J series

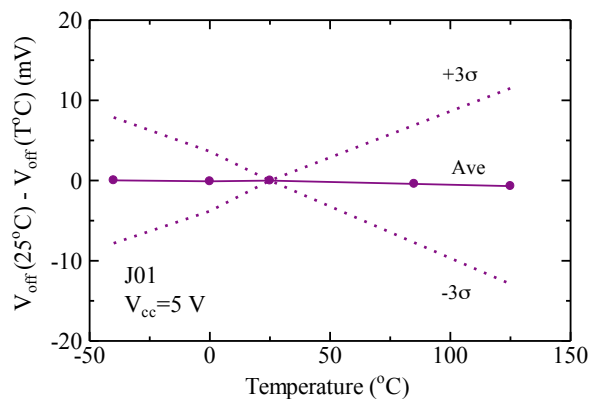
## Output voltage characteristic

- 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.

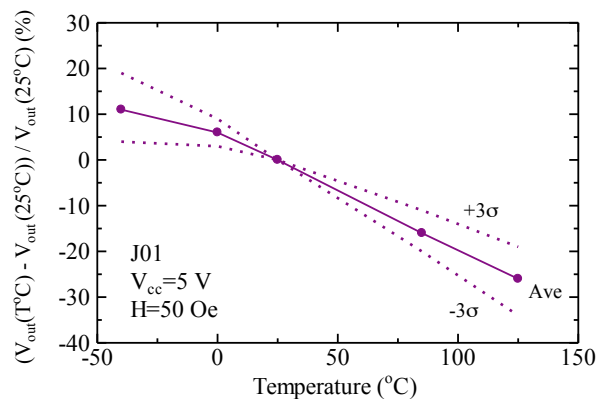


## Temperature characteristics (reference data)

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).