



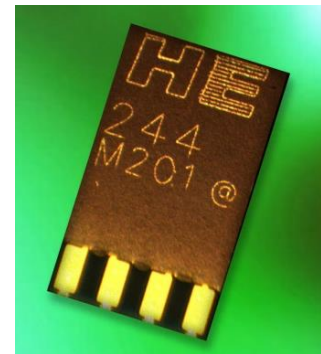
Advanced Sensor Technology

Linear High Precision

Analog Hall Sensor HE244

Features

- Large magnetic field range - a few μ -Tesla to over 10 Tesla
- Very small linearity error - typically 0,1 % up to 1,5 T
- Optimized for low Hall sensor current - typical 500 Ohm and 0,2 Volt/Tesla at 2 mA
- High sensitivity
- Low noise
- Extremely low offset voltage and offset drift
- Low inductive zero component, low EMC pickup
- Very low temperature coefficients
- Very wide operating temperature range
- Very low PHE, Planar Hall Effect Error
- Very flat miniature package
- Pin compatible with Siemens®/Infineon® KSY14 and KSY44



Our products are lead free devices, compliant with RoHS, REACH and 'Japan green' demands.

Typical applications

- Precise magnetic field measurements
- High accuracy in homogenous fields
- Position, rotation sensing
- Movement sensing
- Aerospace
- 3D compass
- Precise current and power measurements
- Measurements in small metal, magnet and ferrite gaps
- Sensing low DC current in strong AC current, as for example in windmills
- NMR, MRI (nuclear spin)



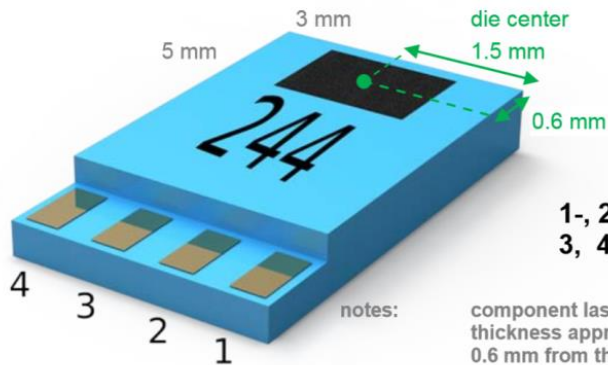
Different packages HE244

HE244S – Solder pad version

Not standard component. Only available on request.

Minimum order quantity applies.

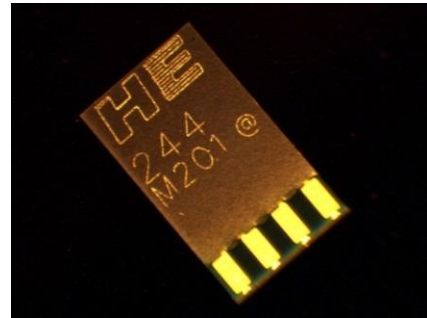
Size 3,0 x 5,0 mm, max. thickness 0,80 mm.



1-, 2+ Supply current
3, 4 Hall voltage

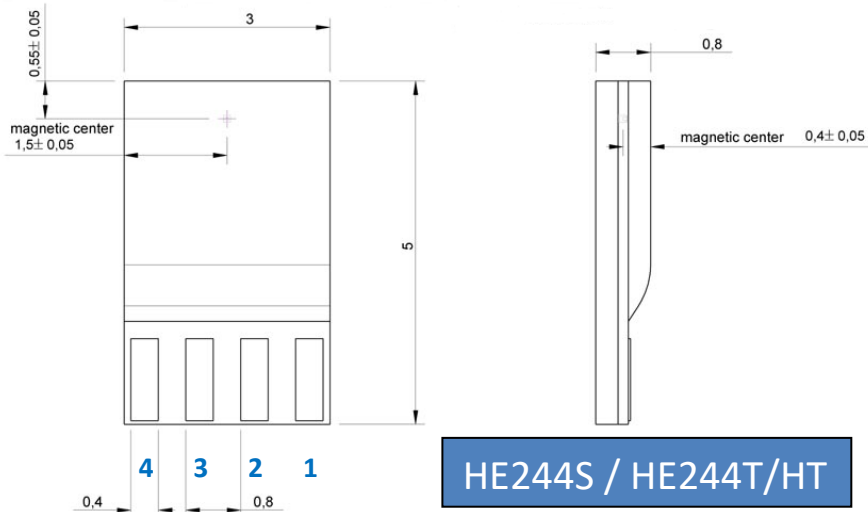
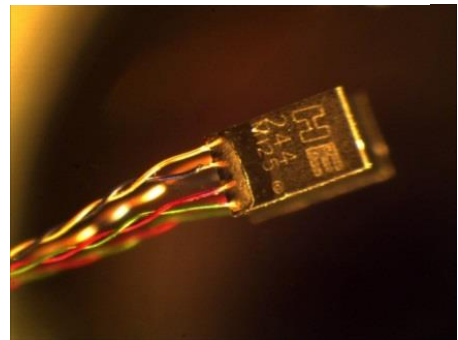
notes:

component laser marking '244', or user defined, with date code, thickness approximately 0.8 mm, die centre at approximately 0.6 mm from the top side, picture shows the solder pad version



HE244T/HT – Wired versions

Standard component. As the HE244S, but with fine twisted pair wires welded to the contacts. The standard version, HE244T, has a maximum temperature of 125 °C. A version with high temperature wires, HE244HT, which can handle temperatures up to 200 °C, is also available. Wire length is 20 cm, other lengths deliverable on request.

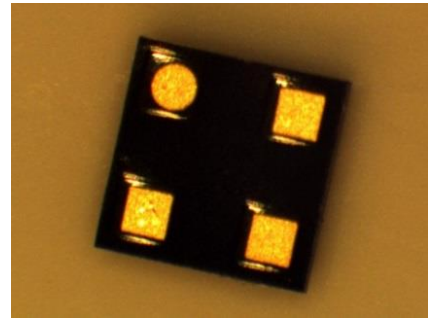


HE244S / HE244T/HT

Pin	Function	Wire color HE244T 125°C	Wire color HE244HT 200°C
1	- supply current	Green	Green
2	+ supply current	Red	Red
3	Hall voltage	Blue	Black
4	Hall voltage	Gold	Gold

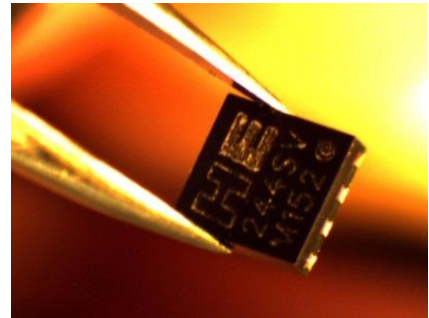
HE244SH – SMD version

Not standard component. Only available on request.
Minimum order quantity applies.
Size 3,0 x 3,0 mm, max thickness app. 0,70 mm.



HE244SV – Vertical SMD version

Not standard component. Only available on request.
Minimum order quantity applies.
Size 3,0 x 3,0 mm, max thickness 1,0 mm.



Specifications HE244

Electrical specifications		Values
Advised supply current		0,2 to 4,0 mA recommended 2 mA*
Open-circuit Hall voltage B=1 T		typical 200 mV at I=2 mA min 180 to max 360
Temperature coefficient of open-circuit Hall voltage B=1 T, at 25°C		typical -0,015 %/Kat I=2 mA min -0,02 to max 0,02
Ohmic offset voltage B=0 T		≤± 250 μV at I=1 mA ≤± 500 μV at I=2 mA
Temperature coefficient of ohmic offset voltage B=0 T		typical ≤ 5 ppm (≤± 0,5 μV/K) at I=2 mA
Linearity of Hall voltage at I=2 mA	B = ± 0 to 1 T	≤± 0,2 % typical ≤± 0,1 %
	B = ± 1 to 2,4 T	Limit not specified typical ≤± 0,2 %
Supply side internal resistance B=0 T		450 to 650 Ω typical 500 Ω
Hall side internal resistance B=0 T		450 to 850 Ω typical 500 Ω
Thermal conductivity in air		Not specified
Thermal conductivity soldered		≥ 2,2 mW/K
Bandwidth		Tested up to 200 kHz

* Optimal signal to noise ratio and low power consumption

** Variations within the same production batch are very small.

Absolute maximum ratings		Values
Supply current		10 mA
Operating temperature	P-version	N/A
	SH-version	-40 to +125 °C
	T-version	-40 to +125 °C
	HT-version	-40 to +200 °C

For very low (cryogenic down to a few Kelvin) or very high (over 200 °C) temperature applications, contact us for more information.