

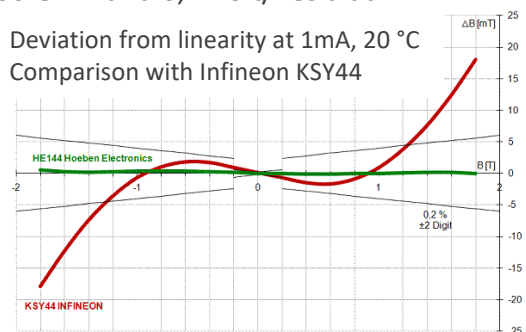


Linear High Precision Analog Hall Sensor AST 10-144xx

Features

- Large magnetic field range - below milli-Tesla to over 10 Tesla
- Very small linearity error - typically 0,1 % up to 1,5 T
- Optimized for low Hall sensor current - typical 1200 Ohm and 0,2 Volt/Tesla at 1 mA
- Very high sensitivity
- Low noise
- Low drift
- Low inductive zero component, low EMC pickup
- Low temperature coefficients
- Very wide operating temperature range
- Very low PHE, Planar Hall Effect Error
- Very flat miniature package
- Pin compatible with Siemens®/Infineon® KSY10

Deviation from linearity at 1mA, 20 °C
Comparison with Infineon KSY44

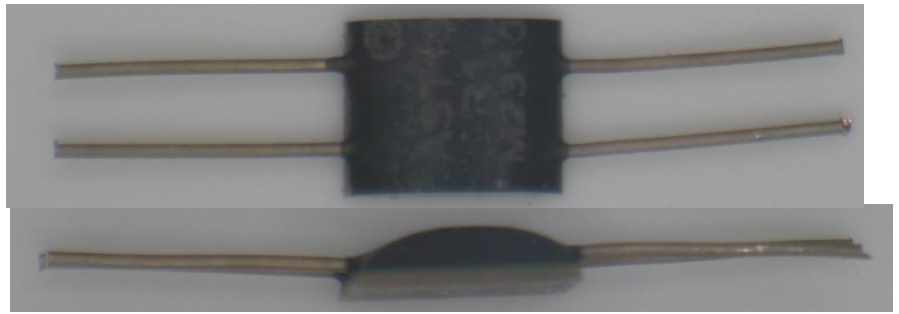


Our products are lead free devices, compliant with RoHS, REACH and 'Japan green' demands.

Typical applications

- Magnetic field measurements
- Oil drill measurement
- Position and rotation sensing
- Distance and thickness measurements
- Aerospace
- Current and power measurement
- Multi-sensor and differential usage
- Control of motor flux strength
- Windmills
- Movement sensing

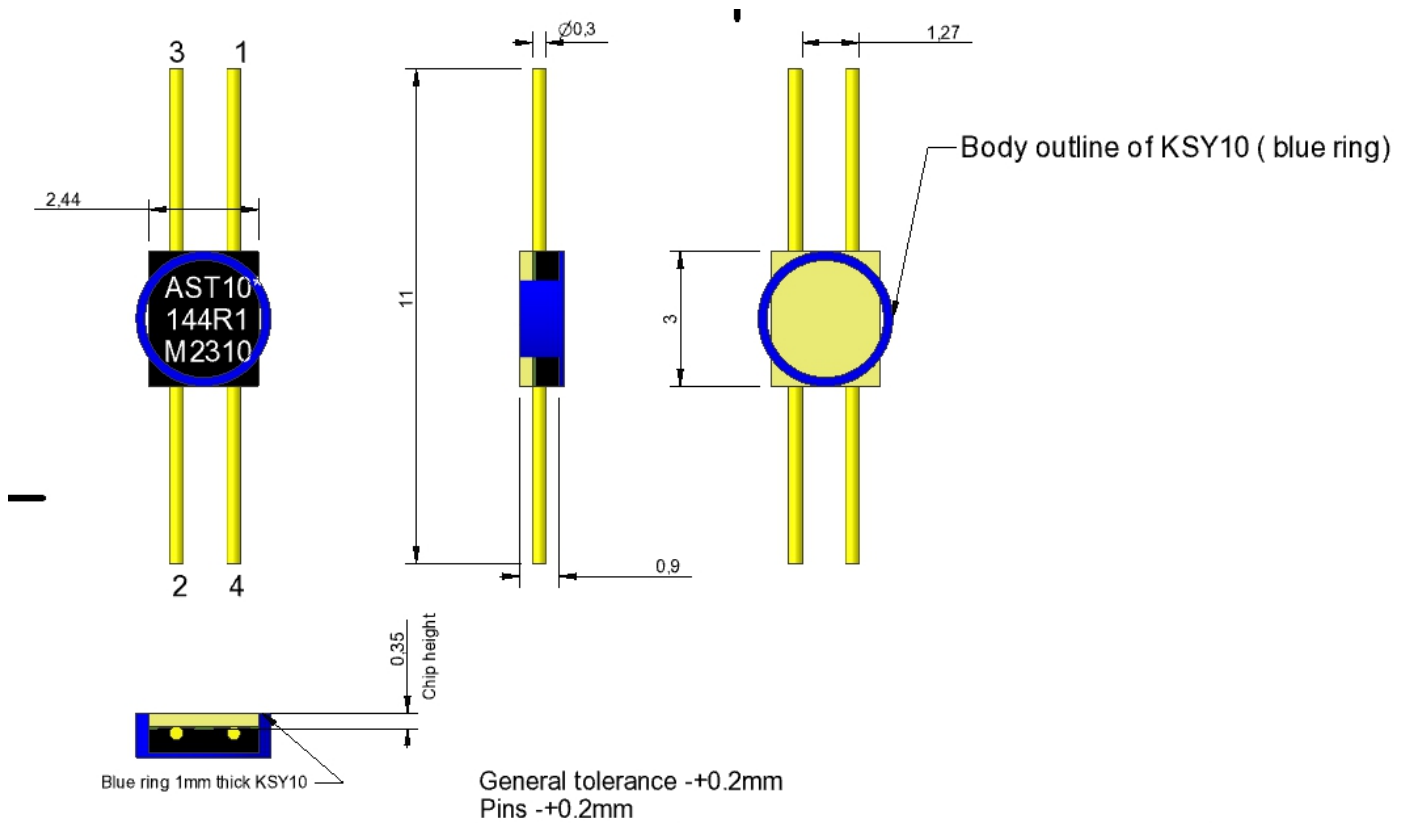
Package AST 10
look alike KSY10



AST 10 – Pin version

Body 3*2.4*0.9mm

Total length 11 mm, pitch 1,27 mm.



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Specifications AST144

Electrical specifications	Values	
	144R1 (std chip)	144LR1 (Low offset)
Advised supply current	0,1 to 2,0 mA recommended 1 mA*	0,1 to 2,0 mA recommended 1 mA*
Open-circuit Hall voltage B=1 T @1mA	min 170 to max 360 Current batch 210 mV/T	min 170 to max 360 Current batch 180 mV/T
Temperature coefficient of open-circuit Hall voltage B=1 T, at 25°C	typical -0,015 %/K at I=1 mA min -0,02 to max 0,02	typical -0,015 %/K at I=1 mA min -0,02 to max 0,02
Ohmic offset voltage B=0 T	≤± 12 mV at I=1 mA Current batch 3.3 mV **	≤± 0,5 mV at I=1 mA
Temperature coefficient of ohmic offset voltage B=0 T	typical 40 ppm/K (6,7 μT/K) at I=1 mA	typical 5 ppm/K at I=1 mA
Linearity of Hall voltage at I=1 mA	B = ± 0 to 1 T B = ± 1 to 2,4 T ≤± 0,2 % (nom. -+0.1%) Limit not specified typical ≤± 0,2 %	≤± 0,2 % (nom. -+0.1%) Limit not specified typical ≤± 0,2 %
Supply side internal resistance B=0 T	900 to 1300 Ω Current batch 1250 Ω	700 to 1000 Ω Current batch 850 Ω
Hall side internal resistance B=0 T	900 to 1700 Ω typical 1250 Ω	700 to 1000 Ω typical 850 Ω
Thermal conductivity in air	≥ 1,5 mW/K	≥ 1,5 mW/K
Thermal conductivity soldered	≥ 2,2 mW/K	≥ 2,2 mW/K
Bandwidth	Not specified (contact us)	Not specified (contact us)

* 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	-40 to +170 °C
	SH-version, AST10	-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.