



# DATA SHEET

## Hall Effect Current Sensor

PN: CHB\_BS3S6H

IPN=20~200A

### Feature

- Closed- loop (compensated) current transducer
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.
- Supply voltage: DC +3.3V
- PCB mounting installation

### Advantages

- High accuracy
- Low temperature drift
- Optimized response time, no insertion losses
- Low power consumption
- Very good linearity
- Can be customized

### Applications

- The application of variable frequency electrical appliances
- AC/DC variable-speed drive
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Inverter applications



RoHS

Electrical data: (Ta=25°C, Vc=+3.3VDC,RL=2KΩ,CL=10000pF)

Parmeter \ Ref	CHB20BS3S6H	CHB50BS3S6H	CH100BS3S6H	CHB200BS3S6H
Rated input I <sub>pn</sub> (A)	20	50	100	200
Measuring range I <sub>p</sub> (A)	0~±20	0~±50	0~±100	0~±200
Turns ratio N <sub>p</sub> /N <sub>s</sub> (T)	1:2000	1:2500	1:4000	1:4000
Inside resistance R <sub>M</sub> (Ω)	31.25±0.1%	15.6±0.1%	12.5±0.1%	6.25±0.1%
Output voltage V <sub>o</sub> (V)	1.650±0.625*(IP/IPN)			
Output voltage V <sub>o</sub> (V)	@IP=0,T=25°C		1.650	
Reference voltage V <sub>R</sub> (V)	@Internal reference, reout		1.650	
Supply voltage V <sub>C</sub> (V)	+3.3 ±5%			
Accuracy X <sub>G</sub> (%)	@IPN,T=25°C		< ±0.5	
Offset voltage V <sub>OE</sub> (mV)	@IP=0,T=25°C		< ±10	
Temperature variation of V <sub>OE</sub> VOT(mV/°C)	@IP=0,-40 ~ +85°C		< ±0.05	
Linearity error ε <sub>r</sub> (%FS)	< 0.1			
Di/dt accurately followed (A/μs)	> 50			
Response time τ <sub>ra</sub> (μs)	@90% of IPN		< 1.0	
Power consumption I <sub>C</sub> (mA)	10+I <sub>s</sub>			



# Cheemi Technology Co., Ltd

Bandwidth BW(KHZ)	@-3dB,IPN	DC-200
Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	3.0

## General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55~ +125
Mass M(g)	70
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

## Dimensions(mm):

	<p>Connection</p>
	<p>General tolerance</p> <p>General tolerance: &lt;math&gt;\pm 0.5\text{mm}&lt;/math&gt;            Primary through-hole : <math>10.5 \times 20.5 \pm 0.3</math>            Connection of Secondary :            2510-04A (Instead of Molex 5045-04A)</p>

## Remarks:

- When the current goes through the primary pin of a sensor, the voltage will be measured at the output end.
- Custom design is available for the different rated input current and the output voltage.
- The dynamic performance is the best when the primary hole is fully filled with.
- The primary conductor should be  $< 100^\circ\text{C}$ .

**WARNING : Incorrect wiring may cause damage to the sensor.**

