

DATA SHEET Hall Effect Current Sensor

PN: CHB_ES3S6H

IPN=10~75A

Supply voltage: DC +3.3V

Feature

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

Advantages

- Excellent accuracy
- Low temperature drift
- Optimized response time, no insertion losses
- Low power consumption

Applications

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

• Can be customized

Very good linearity













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

Ref Parmeter	CHB10ES3S6H	CHB25ES3S6H	СН50ЕS3S6Н	СНВ75ЕS3S6Н
Rated input Ipn(A)	10	25	50	75
Measuring range Ip(A)	0∼±20	0~±50	0~±100	0~±150
Turns ratio Np/NS (T)	1:800	1:2000	1:2000	1:2000
Inside resistance $RM(\Omega)$	50±0.1%	50±0.1%	25±0.1%	16.5±0.1%
Output voltage Vo(V)	1.650±0.625*(IP/IPN)			
Output voltage Vo(V)	@IP=0,T=25°C 1.650			
Reference voltage VR(V)	@Internal reference,reout 1.650			
Supply voltage VC(V)	+3.3 ±5%			
Accuracy XG(%)	@IPN,T=25°C <±0.5			
Offset voltage VOE(mV)	@IP=0,T=25°C <±10			
Temperature variation of VOE VOT(mV/°C)	@IP=0,-40 ~ +85°C <±0.01			
Linearity error $\varepsilon r(\%FS)$	< 0.1			
Di/dt accurately followed (A/μs)	> 50			

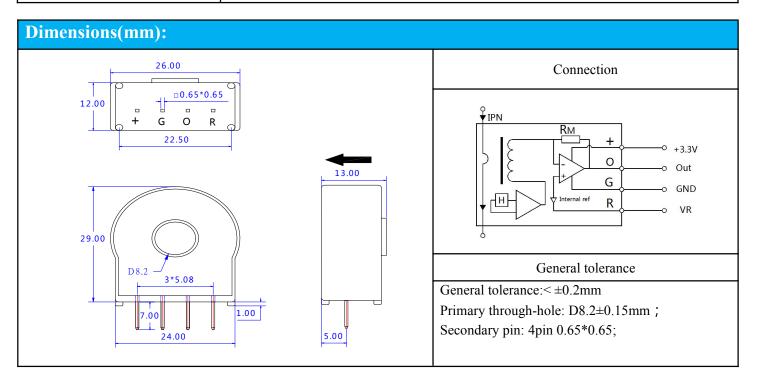


1

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Response time tra(μs)	@90% of IPN	< 1.0
Power consumption IC(mA)		10+Is
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)	13		
Plastic material	PBT G30/G15, UL94- V0;		
	IEC60950-1:2001		
Standards	EN50178:1998		
	SJ20790-2000		



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 if fully filled with.
- The primary conductor should be <100°C.

WARNING: Incorrect wiring may cause damage to the sensor.

