



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Hall Effect Current Sensors S22P Series



Features:

- Closed Loop type
- Voltage output
- Unipolar power supply
- Configurable integrated primary
- Printed circuit board mounting
- UL recognised - plastic case material UL94V0
- UL Recognition

Advantages:

- Excellent accuracy and linearity
- Low temperature drift
- Wide frequency bandwidth
- No insertion loss
- High Immunity to external interferences
- Optimised response time
- Current overload capability

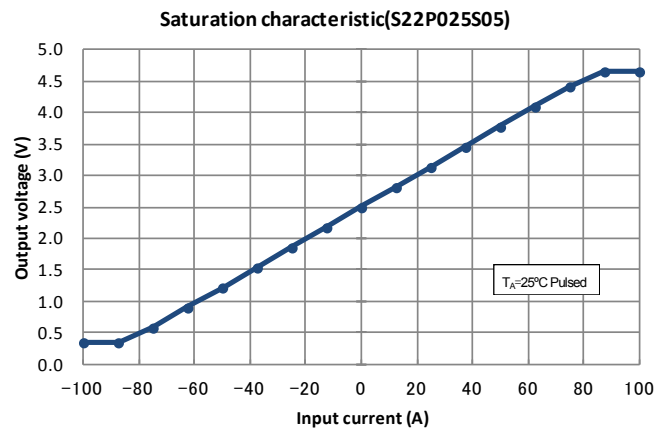
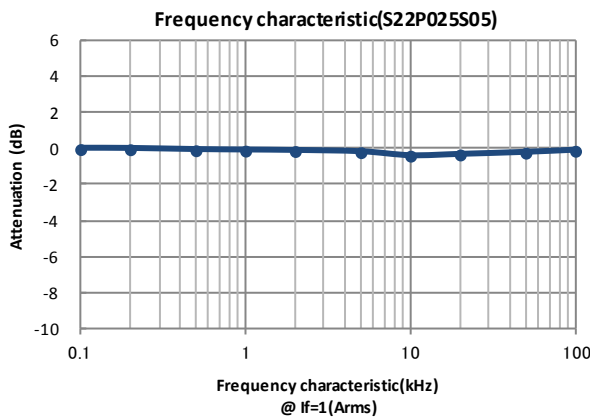
Specifications

 $T_A=25^{\circ}\text{C}$, $V_{CC}=+5\text{V}$, $R_L=10\text{k}\Omega$

Parameters	Symbol	S22P006S05	S22P015S05	S22P025S05
Primary nominal current	I_f	6A	15A	25A
Saturation current	I_{fmax}	$\geq \pm 18\text{A}$	$\geq \pm 45\text{A}$	$\geq \pm 75\text{A}$
Rated output voltage	V_o	$V_{of} \pm 0.625\text{V}$ (at I_f)		
Offset voltage ¹ (at $I_f=0\text{A}$)	V_{of}	$2.5\text{V} \pm 0.050\text{V}$	$2.5\text{V} \pm 0.020\text{V}$	$2.5\text{V} \pm 0.015\text{V}$
Output voltage accuracy(at I_f)	X	$0.625\text{V} \pm 0.010\text{V}$ (at I_f)		
Output linearity ² ($0\text{A} \sim I_f$)	ϵ_L	$\leq \pm 0.2\%$ (at I_f)		
Power supply voltage	V_{CC}	$+5\text{V} \pm 5\%$		
Consumption current ³	I_{CC}	Typ. 12.5mA (at $I_f=0\text{A}$) + $37.5\text{mA} / 22.5\text{mA} / 9\text{mA}$ (at $I_f = 75\text{A} / 45\text{A} / 18\text{A}$)		
Response time ⁴	t_r	$\leq 1.0\mu\text{s}$ (at $di/dt = 100\text{A}/\mu\text{s}$)		
Thermal drift of gain ⁵	TcV_o	$\leq \pm 0.05\text{mV}/^{\circ}\text{C}$		
Thermal drift of offset	TcV_{of}	$-10^{\circ}\text{C} \sim 25^{\circ}\text{C} : \leq \pm 1.6\text{mV}/^{\circ}\text{C}$ $25^{\circ}\text{C} \sim 85^{\circ}\text{C} : \leq \pm 0.8\text{mV}/^{\circ}\text{C}$	$-10^{\circ}\text{C} \sim 25^{\circ}\text{C} : \leq \pm 0.6\text{mV}/^{\circ}\text{C}$ $25^{\circ}\text{C} \sim 85^{\circ}\text{C} : \leq \pm 0.3\text{mV}/^{\circ}\text{C}$	$-10^{\circ}\text{C} \sim 25^{\circ}\text{C} : \leq \pm 0.4\text{mV}/^{\circ}\text{C}$ $25^{\circ}\text{C} \sim 85^{\circ}\text{C} : \leq \pm 0.2\text{mV}/^{\circ}\text{C}$
Hysteresis error	V_{OH}	$\leq 0.5\text{mV}$ (at $I_f=0\text{A} \rightarrow I_f \rightarrow 0\text{A}$)		
Insulation voltage	V_d	AC 3kV for 1minute (Sensing current 0.5mA) Primary \leftrightarrow Secondary		
Insulation resistance	R_{IS}	$\geq 500\text{M}\Omega$ (at DC 500V), primary \leftrightarrow secondary		
Ambient operation temperature	T_A	$-10^{\circ}\text{C} \sim +85^{\circ}\text{C}$		
Ambient storage temperature	T_S	$-25^{\circ}\text{C} \sim +100^{\circ}\text{C}$		

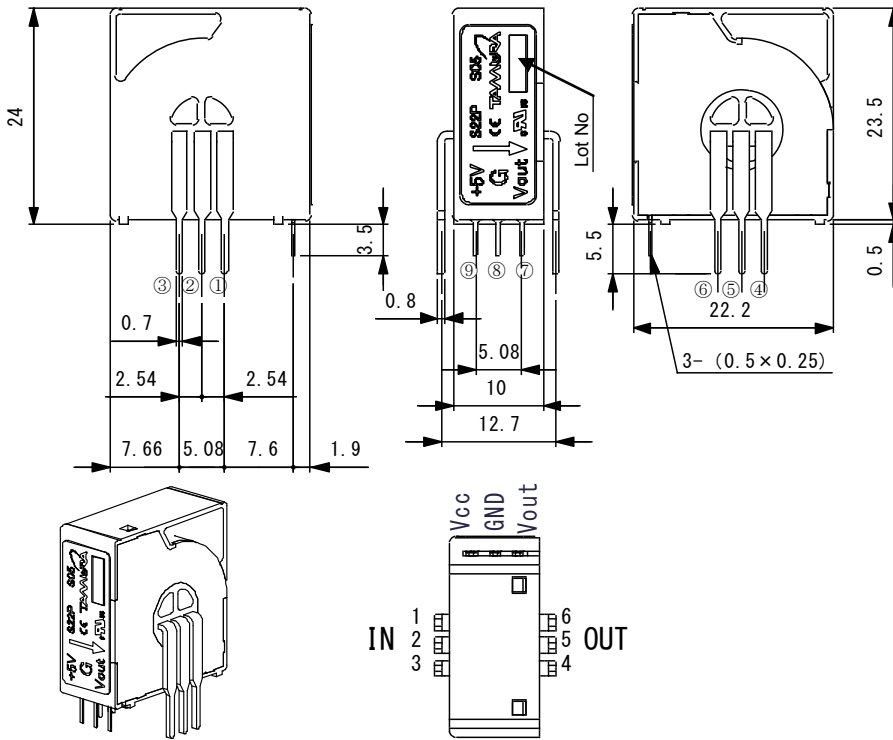
¹ After removal of core hysteresis — ² Without offset — ³ Conversion ratio:2000 — ⁴ Time between 90% input current full scale and 90% of sensor output full scale — ⁵ Without Thermal drift of offset

Electrical Performances



Hall Effect Current Sensors S22P Series

Mechanical dimensions



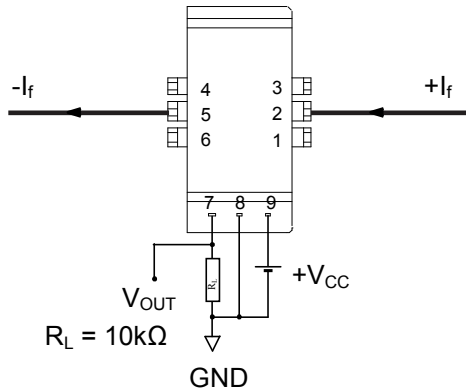
NOTES

1. Unit is mm
2. Tolerance is 0.5mm

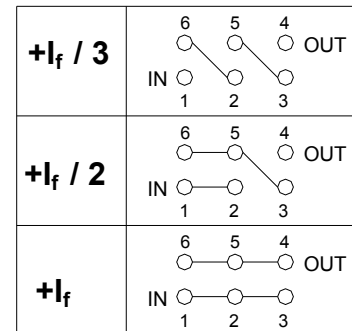
Terminal number:

1. IN-1 (Primary input current (+))
2. IN-2 (Primary input current (+))
3. IN-3 (Primary input current (+))
4. OUT-3 (Primary input current (-))
5. OUT-2 (Primary input current (-))
6. OUT-1 (Primary input current (-))
7. V_{OUT}
8. GND
9. $+V_{CC}(+5V)$

Electrical connection diagram



Connection diagram



UL Standard

UL 508 , CSA C22.2 No.14
(UL FILE No.E243511)

- For use in Pollution Degree 2 Environment.
- Maximum Surrounding air temperature rating, 85°C.

Package & Weight Information

Weight	Pcs/box	Pcs/carton	Pcs/pallet
8g	100	400	12000