



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

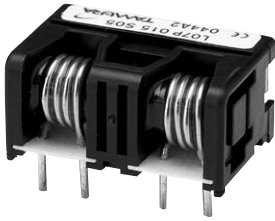
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# Hall Effect Current Sensors L07P\*\*\*S05 Series



## Features:

- Open Loop type
- Dual integrated primary
- Unipolar power supply
- Printed circuit board mounting
- Insulated plastic case according to UL94V0
- UL Recognition

## Advantage:

- Excellent accuracy and linearity
- Wide nominal current range
- Low temperature drift
- Wide frequency bandwidth
- No insertion loss
- High Immunity To External Interference
- Optimised response time
- Current overload capability

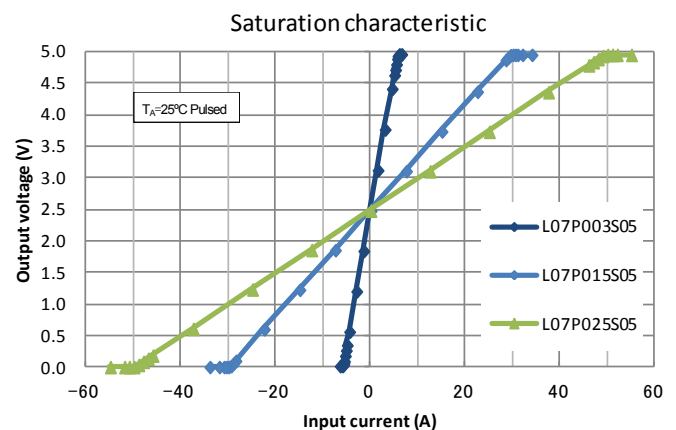
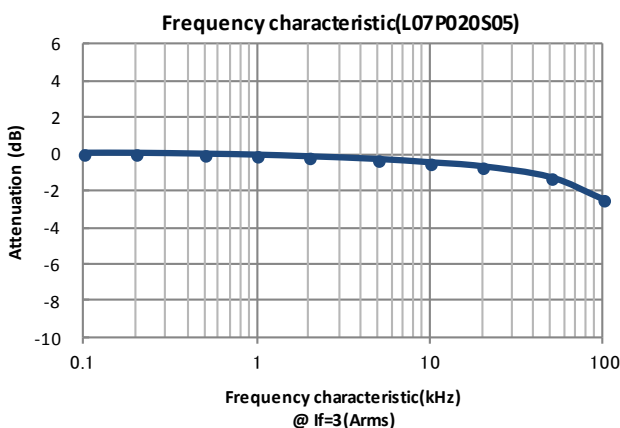
## Specifications

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

Parameters	Symbol	L07P003S05	L07P005S05	L07P010S05	L07P015S05	L07P020S05	L07P025S05	L07P030S05
Primary nominal current	$I_f$	3A	5A	10A	15A	20A	25A	30A
Saturation current	$I_{fmax}$	$\geq \pm I_f \times 1.5$						
Rated output voltage	$V_o$	$V_{of} + 1.250\text{V} \pm 0.040\text{V}$ (at $I_f$ )						
Offset Voltage <sup>1</sup>	$V_{of}$	$V_{ref}^1 \pm 0.040\text{V}$ (at $I_f = 0\text{A}$ )						
Output Linearity <sup>2</sup> (0A~ $I_f$ )	$\epsilon_L$	$\leq \pm 1\%$ (at $I_f$ )						
Power supply voltage	$V_{CC}$	$+ 5\text{V} \pm 5\%$						
Consumption Current	$I_c$	$\leq \pm 30\text{mA}$						
Response Time <sup>3</sup>	$t_r$	$\leq 5\mu\text{s}$ (at $di/dt = I_f / \mu\text{s}$ )						
Thermal drift of gain <sup>4</sup>	$TcVo$	$\leq \pm 2.0\text{mV} / ^{\circ}\text{C}$						
Thermal drift of offset	$TcVof$	$\leq \pm 2\text{mV} / ^{\circ}\text{C}$						
Hysteresis error	$V_{OH}$	$\leq 15\text{mV}$ (at $I_f = 0\text{A} \rightarrow I_f \rightarrow 0\text{A}$ )						
Insulation voltage	$V_d$	AC2000V for 1minute (sensing current 0.5mA), primary $\leftrightarrow$ secondary						
Insulation Resistance	$R_{IS}$	$\geq 500\text{M}\Omega$ (at DC500V), primary $\leftrightarrow$ secondary						
Ambient operation temperature	$T_A$	$-30^{\circ}\text{C} \sim +80^{\circ}\text{C}$						
Ambient storage temperature	$T_S$	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$						

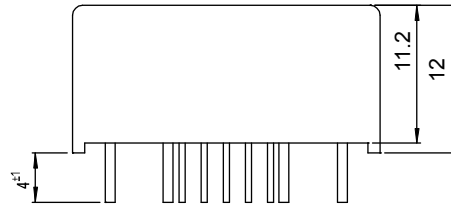
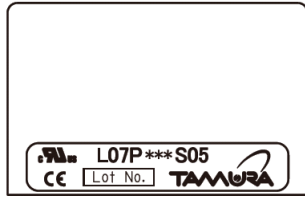
<sup>1</sup>  $V_{REF} = V_{CC} / 2$  (ratiometric). After removal of core hysteresis—<sup>2</sup> Without offset —<sup>3</sup> Time between 10% input current full scale and 90% of sensor output full scale. each channel's value, non-measured circuit is set to 0A. —<sup>4</sup> Without Thermal drift of offset

## Electrical Performances

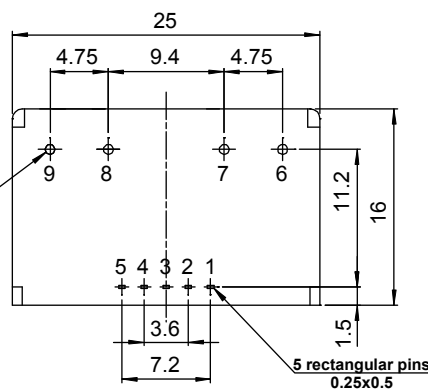


# Hall Effect Current Sensors L07P\*\*\*S05 Series

## Mechanical dimensions



A	φD
3A	φ0.6
5A	φ0.8
10~15A	φ1.4
20~30A	φ1.6

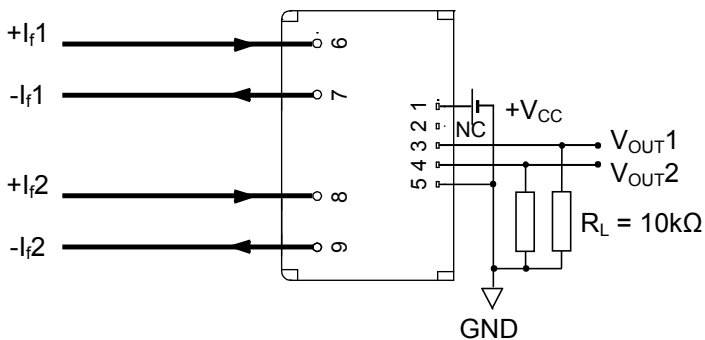


## NOTES

1. Unit is mm
2. Tolerance is 0.5mm

Terminal	Function
1	+V <sub>CC</sub> (+5V)
2	NC
3	V <sub>OUT1</sub>
4	V <sub>OUT2</sub>
5	GND
6	Primary input current1 (+)
7	Primary input current1 (-)
8	Primary input current2 (+)
9	Primary input current2 (-)

## Electrical 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, 80°C.

## Package & Weight Information

Weight	Pcs/box	Pcs/carton	Pcs/pallet
12g	100	400	9600