



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!



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Hall Effect Current Sensors S22P***S05M2 Series



Features:

- Closed Loop type
- Voltage output
- Unipolar power supply
- Configurable integrated primary
- Printed circuit board mounting
- UL recognised - plastic case material UL94V0
- Improved dv/dt Immunity

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

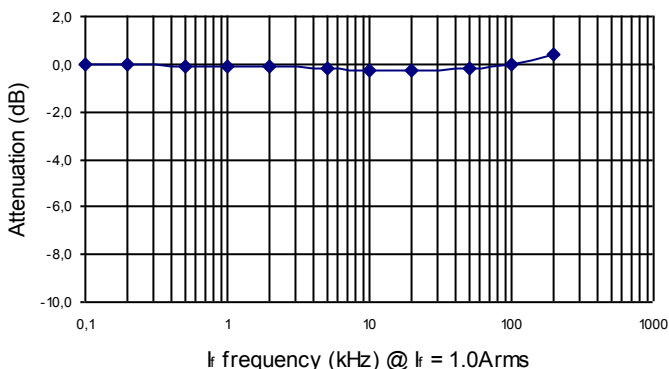
$T_A=25^{\circ}\text{C}$, $V_{CC}=+5\text{V}$, $R_L=10\text{k}\Omega$

Parameters	Symbol	S22P006S05M2	S22P015S05M2	S22P025S05M2
Rated Current	I_f	6A	15A	25A
Saturation Current	I_{fmax}	$\pm 18\text{A}$	$\pm 45\text{A}$	$\pm 75\text{A}$
Output Voltage	V_{OUT}	$V_{OE} \pm 0.625\text{V} @ I_f$		
Offset Voltage @ $I_f=0$	V_{OE}	$2.5\text{V} \pm 50\text{mV}$	$2.5\text{V} \pm 20\text{mV}$	$2.5\text{V} \pm 15\text{mV}$
Output Voltage Accuracy	X	$0.625\text{V} \pm 10\text{mV} @ I_f$		
Output Linearity	ϵ_L	$\pm 0.2\% @ I_f$		
Supply Voltage	V_{CC}	$+5\text{V} \pm 5\%$		
Current Consumption	I_{CC}	Typ. $12.5\text{mA} (I_f=0) + 37.5\text{mA} (I_f=\text{max})$		
Response Time ¹	t_r	$\leq 1.0\mu\text{s} @ di/dt = I_f / \mu\text{s}$		
Output Temperature Characteristic	TCV_{OUT}	$< \pm 0.05\text{mV}/^{\circ}\text{C}$		
Offset Temperature Characteristic	TCV_{OE}	$-10^{\circ}\text{C} \sim 25^{\circ}\text{C} : \pm 1.6\text{mV}/^{\circ}\text{C}$ $25^{\circ}\text{C} \sim 85^{\circ}\text{C} : \pm 0.8\text{mV}/^{\circ}\text{C}$	$-10^{\circ}\text{C} \sim 25^{\circ}\text{C} : \pm 0.6\text{mV}/^{\circ}\text{C}$ $25^{\circ}\text{C} \sim 85^{\circ}\text{C} : \pm 0.3\text{mV}/^{\circ}\text{C}$	$-10^{\circ}\text{C} \sim 25^{\circ}\text{C} : \pm 0.4\text{mV}/^{\circ}\text{C}$ $25^{\circ}\text{C} \sim 85^{\circ}\text{C} : \pm 0.2\text{mV}/^{\circ}\text{C}$
Hysteresis allowance	V_{OH}	$\leq 0.5\text{mV} (0\text{A} \leftrightarrow I_f)$		
Insulation Withstanding	V_d	AC 3kV for 1minute (Sensing current 0.5mA) Primary \leftrightarrow Secondary		
Insulation Resistance	R_{IS}	$> 500\text{M}\Omega (@ \text{DC}500\text{V})$ Primary \leftrightarrow Secondary		
Frequency Bandwidth	f	DC ... 200 kHz		
Operating Temperature	T_A	$-10^{\circ}\text{C} \sim +85^{\circ}\text{C}$		
Storage Temperature	T_s	$-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$		

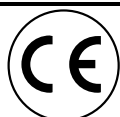
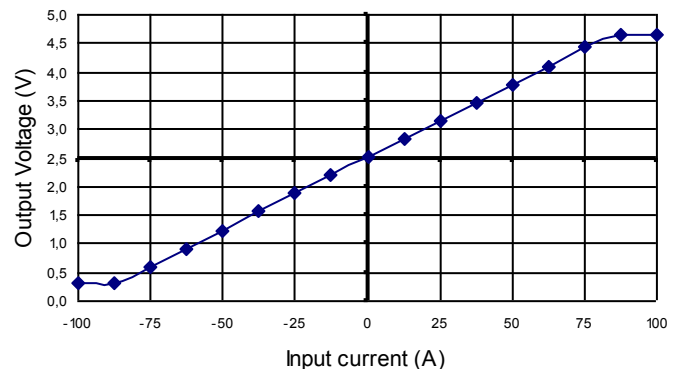
¹ Time between 10% input current full scale and 90% of sensor output full scale

Electrical Performances

Frequency Characteristic



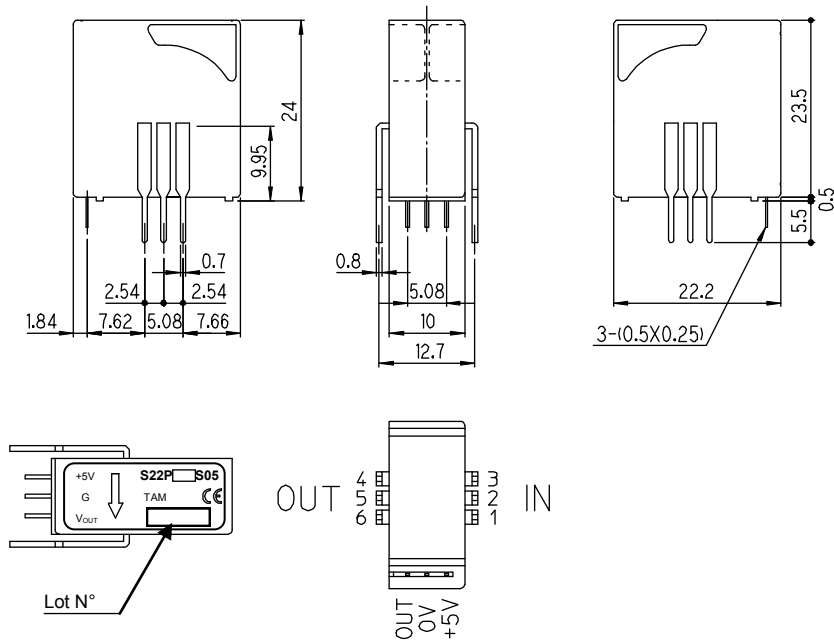
Saturation Characteristic



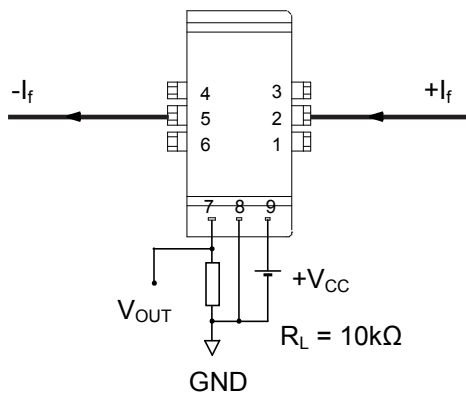
Tamura reserve the right to modify its products in order to improve them without prior notice

Hall Effect Current Sensors S22P***S05M2 Series

Mechanical dimensions in mm



Electrical connection diagram



Connection diagram

+I_f / 3	
+I_f / 2	
+I_f	

Package & Weight Information

Weight	Pcs/box	Pcs/carton	Pcs/pallet
8g	100	400	9600