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

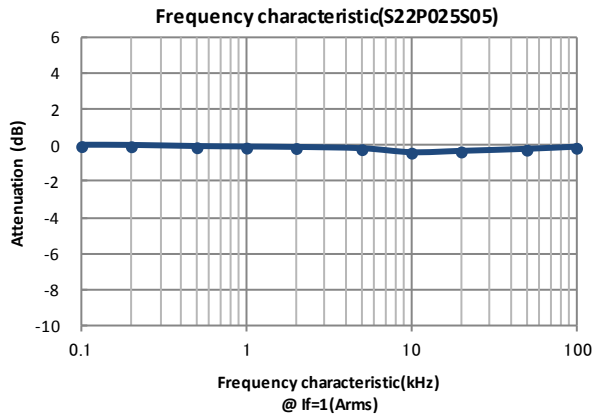
Specifications

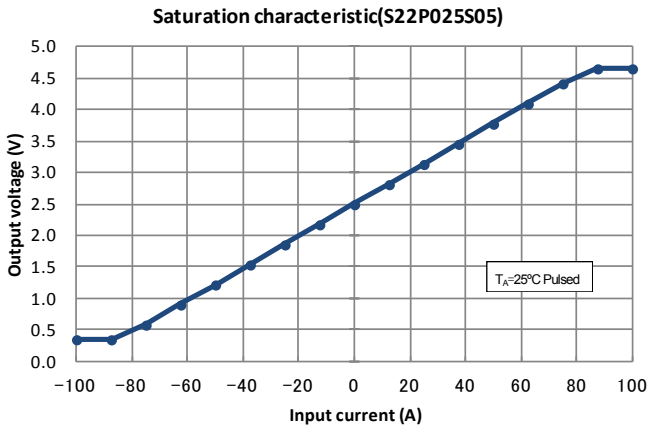
T_A=25ºC, V_{CC}=+5V, R_L=10kΩ

Parameters	Symbol	S22P006S05	S22P015S05	S22P025S05
Primary nominal current	I_f	6A	15A	25A
Saturation current	I_{fmax}	≥ ± 18A	≥ ± 45A	≥ ± 75A
Rated output voltage	V_o	V_{of} ±0.625V (at If)		
Offset voltage[1](at If=0A)	V_{of}	2.5V±0. 050V	2.5V±0.020V	2.5V±0.015V
Output voltage accuracy(at If)	X	0.625V±0.010V(at If)		
Output linearity[2](0A～If)	ε_L	≤±0.2% (at If)		
Power supply voltage	V_{CC}	+5V±5%		
Consumption current[3]	I_{CC}	Typ. 12.5mA (at If=0A) + 37.5mA / 22.5mA / 9mA (at If = 75A / 45A / 18A)		
Response time[4]	t_r	≤ 1.0μs (at di/dt = 100A/ μs)		
Thermal drift of gain[5]	TcVo	≤ ±0.05mV/ºC		
Thermal drift of offset	TcVof	-10ºC~25ºC : ≤±1.6mV/ºC 25ºC~85ºC : ≤±0.8mV/ºC	-10ºC~25ºC : ≤±0.6mV/ºC 25ºC~85ºC : ≤±0.3mV/ºC	-10ºC~25ºC : ≤±0.4mV/ºC 25ºC~85ºC : ≤±0.2mV/ºC
Hysteresis error	V_{OH}	≤0.5mV (at If=0A→If→0A)		
Insulation voltage	V_d	AC 3kV for 1minute (Sensing current 0.5mA) Primary ⇔ Secondary		
Insulation resistance	R_{IS}	≥ 500MΩ (at DC500V), primary ⇔ secondary		
Ambient operation temperature	T_A	-10ºC~+85ºC		
Ambient storage temperature	T_S	-25ºC~+100ºC		

[1] After removal of core hysteresis— [2] Without offset —[3] Conversion ratio1:2000—[4] Time between 90% input current full scale and 90% of sensor output full scale — [5] Without Thermal drift of offset

Electrical Performances





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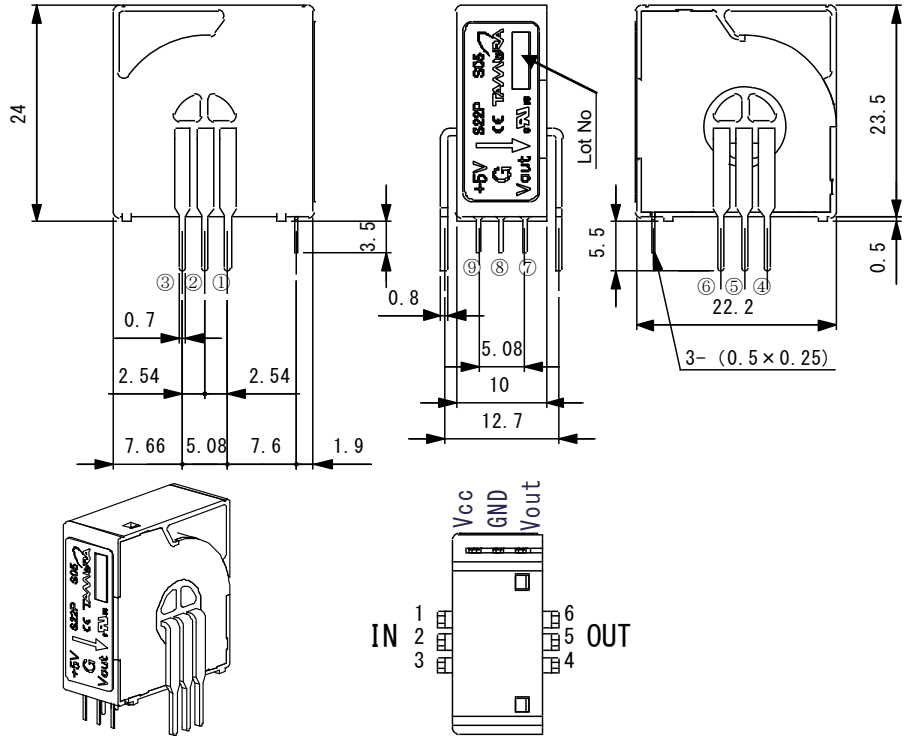
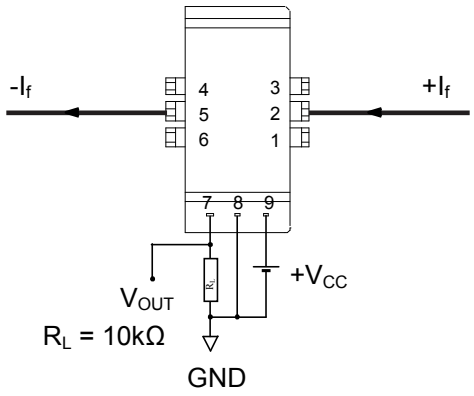
Mechanical dimensions



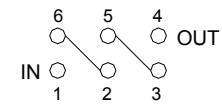
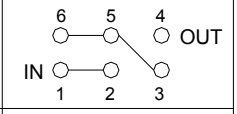
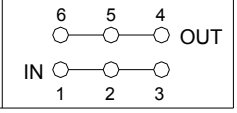
NOTES
1. Unit is mm
2. Tolerance is 0.5mm

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

$+I_f$ / 3	
$+I_f$ / 2	
$+I_f$	

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

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Tamura:

S22P025S05 S22P015S05 S22P006S05