Hall Effect Current Sensor S22P006S05M2

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

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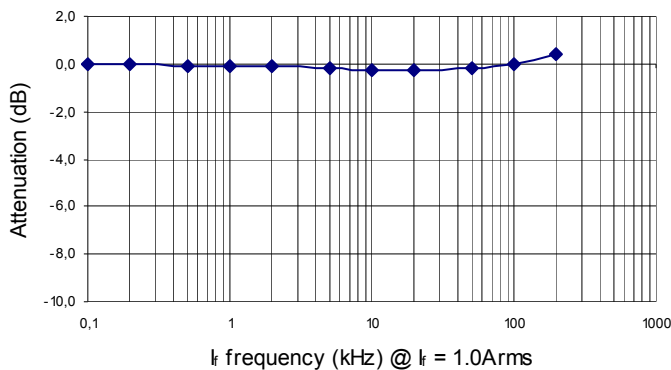- Current overload capability

Specifications

$T_A=25ºC$, $V_{CC}=+5V$, $R_L=10kΩ$

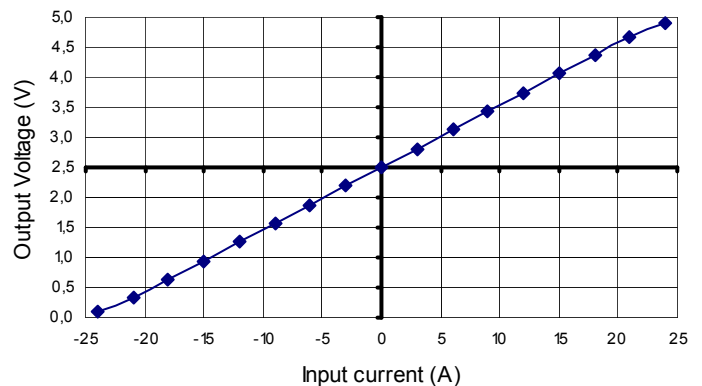| Parameters	Symbol	S22P006S05
Rated Current	I_f	6A
Saturation Current	I_{fmax}	±18A
Output Voltage	V_{OUT}	V_{OE} ±0.625V @ I_f
Offset Voltage @ $I_f=0$	V_{OE}	2.5V±50mV
Output Voltage Accuracy	X	0.625V±10mV @ I_f
Output Linearity	$ε_L$	±0.2% @ I_f
Supply Voltage	V_{CC}	+5V±5%
Consumption Current	I_{CC}	Typ. 12.5mA @ $I_f=0$
Response Time[1]	t_r	≤ 1.0µs @ di/dt = I_f / µs
Output Temperature Characteristic	TCV_{OUT}	< ±0.05mV/ºC
Offset Temperature Characteristic	TCV_{OE}	-10ºC~25ºC : ±1.6mV/ºC 25ºC~85ºC : ±0.8mV/ºC
Hysteresis allowance	V_{OH}	≤0.5mV (0A ⇔ I_f)
Insulation Withstanding	V_d	AC 3kV for 1minute (Sensing current 0.5mA) Primary ⇔ Secondary
Insulation Resistance	R_{IS}	> 500MΩ (@ DC500V) Primary ⇔ Secondary
Frequency Bandwidth	f	DC … 200 kHz
Operating Temperature	T_A	-40ºC~+85ºC
Storage Temperature	T_S	-40ºC~+90ºC

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

Electrical Performances

Frequency Characteristic

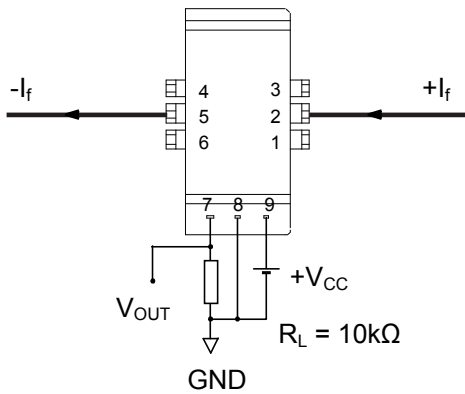
Attenuation (dB) vs I_f frequency (kHz) @ I_f = 1.0Arms

Saturation Characteristic

Output Voltage (V) vs Input current (A)

Mechanical dimensions in mm

S22P006S05M2
+5V
G
V$_{OUT}$
TAM

Lot N°

OUT 4 5 6   3 2 1 IN

OUT 0V +5V
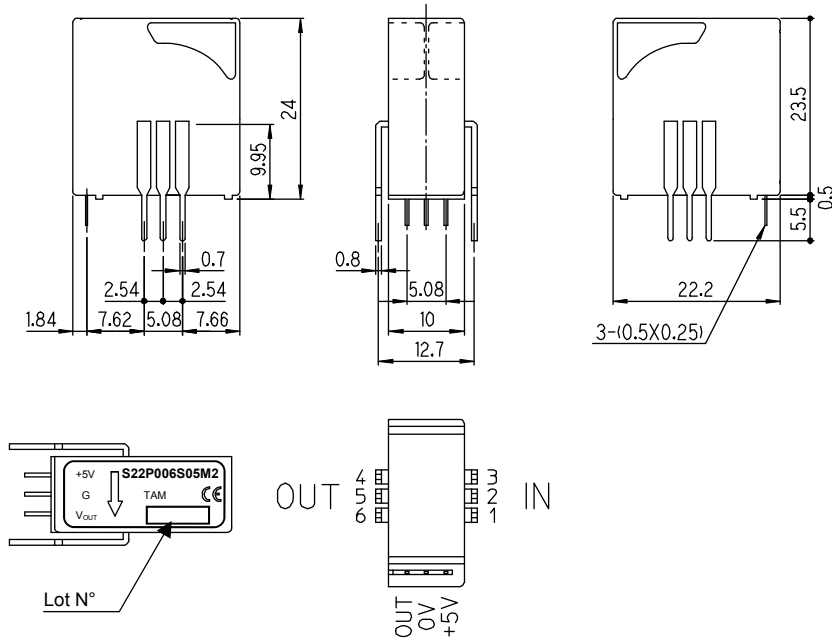
Electrical connection diagram

$-I_f$ 4 5 6   3 2 1 $+I_f$

7 8 9

V_{OUT}

$+V_{CC}$

$R_L = 10k\Omega$

GND

Connection diagram

$+I_f$ / 3	IN 1 2 3 — OUT 6 5 4
$+I_f$ / 2	IN 1 2 3 — OUT 6 5 4
$+I_f$	IN 1 2 3 — OUT 6 5 4

Package & Weight Information

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