

Hall Effect Current Sensors L06P***S05 Series



Features:

- Open Loop type
- Printed circuit board mounting
- Horizontal mounting
- Unipolar power supply
- Industrial temperature range
- Mounting pins
- Insulated plastic case according to UL94V0

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

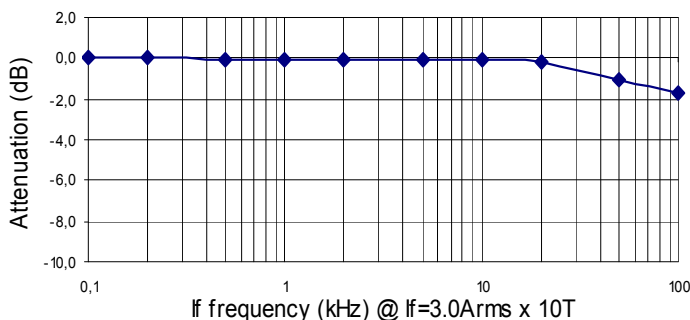
$T_A=25^{\circ}\text{C}$, $V_{CC}=+5\text{V}$, $R_L=10\text{k}\Omega$

Parameters	Symbol	L06P300S05	L06P400S05	L06P500S05	L06P600S05	L06P700S05	L06P800S05
Rated current	I_f	300AT	400AT	500AT	600AT	700AT	800AT
Maximum Current	I_{fmax}	$\geq I_f \times 1.33$					
Output Voltage	V_{OUT}	$V_{OE} \pm 1.5\text{V} @ \pm I_f$					
Offset Voltage ¹	V_{OE}	$V_{REF} \pm 30\text{mV} @ I_f = 0\text{A}$					
Accuracy ²	X	$< 1\% @ I_f$					
Output Linearity ²	ϵ_L	$\leq \pm 1\% @ I_f$					
Power Supply	V_{CC}	$+ 5\text{V} \pm 2\%$					
Current Consumption	I_c	$\leq 15\text{mA}$					
Response Time ³	t_r	$\leq 5\mu\text{s} (@ di/dt = 100\text{A} / \mu\text{s})$					
Output Temperature Characteristic ²	TCV_{OUT}	$\leq \pm 1.5\text{mV}/^{\circ}\text{C}$					
Offset Temperature Characteristic	TCV_{OE}	$\leq \pm 1.0\text{mV}/^{\circ}\text{C} @ I_f = 0\text{A}$					
Hysteresis error	V_{OH}	$\leq 10\text{mV} (0\text{A} \Leftrightarrow I_f)$					
Withstand Voltage	V_d	AC2500V for 1minute (sensing current 0.5mA), inside of aperture \Leftrightarrow terminal					
Insulation Resistance	R_{IS}	$> 500\text{M}\Omega$ (500V DC), inside of aperture \Leftrightarrow terminal					
Frequency Bandwidth ⁴	f	DC .. 50kHz					
Operating Temperature	T_A	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$					
Storage Temperature	T_S	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$					

¹ $V_{REF} = V_{CC} / 2$ (ratiometric) — ² Without offset — ³ Time between 10% input current full scale and 90% of sensor output full scale — ⁴ Small signal only to avoid excessive heating of magnetic core

Electrical Performances

Frequency Characteristic (L06P400S05)



Saturation Characteristic (L06P400S05)

