

Hall Effect Current Sensors L01Z***S05 Series



Features:

- Open Loop type
- Printed circuit board mounting
- Unipolar power supply
- Aperture for cable or bus bar
- Insulated plastic case according to UL94V0

Advantage:

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

Specifications

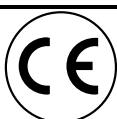
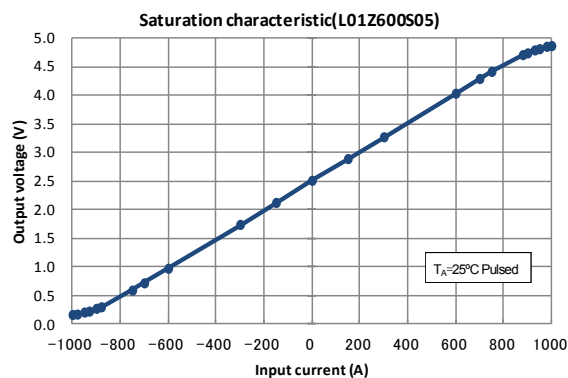
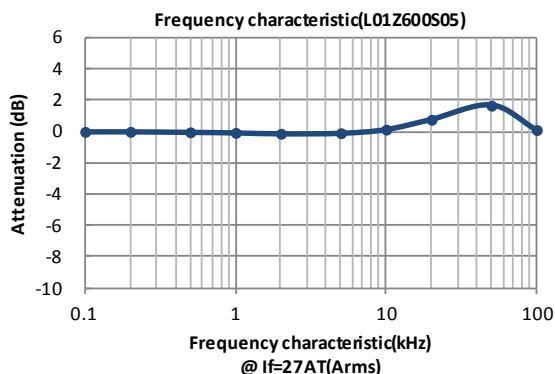
 $T_A = 25^\circ\text{C}$, $V_{CC} = +5\text{V}$, $R_L = 10\text{k}\Omega$

Parameters	Symbol	L01Z050S05	L01Z100S05	L01Z150S05	L01Z200S05	L01Z300S05	L01Z400S05	L01Z500S05	L01Z600S05
Primary nominal current	I _f	50AT	100AT	150AT	200AT	300AT	400AT	500AT	600AT
Saturation current	I _{fmax}	≥ ± I _f × 1.25							
Rated output voltage (at I _f)	V _o	V _{of} +1.5V ±0.045V	V _{of} +1.5V ± 0.035V						
Offset voltage ¹ (at I _f =0A)	V _{of}	V _{REF} ¹ ±0.035V	V _{REF} ¹ ± 0.030V						
Saturation output voltage	V _{o min/max}	V _{o min} ≤ 0.5V, 4.5V ≤ V _{o max}							
Output linearity ² (0A~I _f)	ε _L	≤ ±1% (at I _f)							
Power supply voltage	V _{CC}	5V ±2%							
Consumption current	I _{cc}	≤ 15mA							
Response time ³	t _r	≤ 10μs (at di/dt = 100A / μs)							
Thermal drift of gain ⁴	TcVo	≤ ± 2mV/°C	≤ ± 1.5mV/°C						
Thermal drift of offset	TcVof	≤ ± 2mV/°C	≤ ± 1.0mV/°C						
Hysteresis error (at I _f =0A→I _f →0A)	V _{OH}	≤ 8mV			≤ 4mV		≤ 6mV		
Insulation voltage	V _d	AC2500V for 1minute (sensing current 0.5mA), inside of through hole ⇔ terminal							
Insulation resistance	R _{IS}	≥ 500MΩ (at DC500V) , inside of through hole ⇔ terminal							
Ambient operation tem- perature	T _A	-10°C~+80°C							
Ambient storage tempera- ture	T _S	-15°C~+85°C							

¹ $V_{REF} = V_{CC} / 2$ (ratiometric). After removal of core hysteresis — ² Without offset — ³ Time between 90% input current full scale and 90% of sensor output full scale —

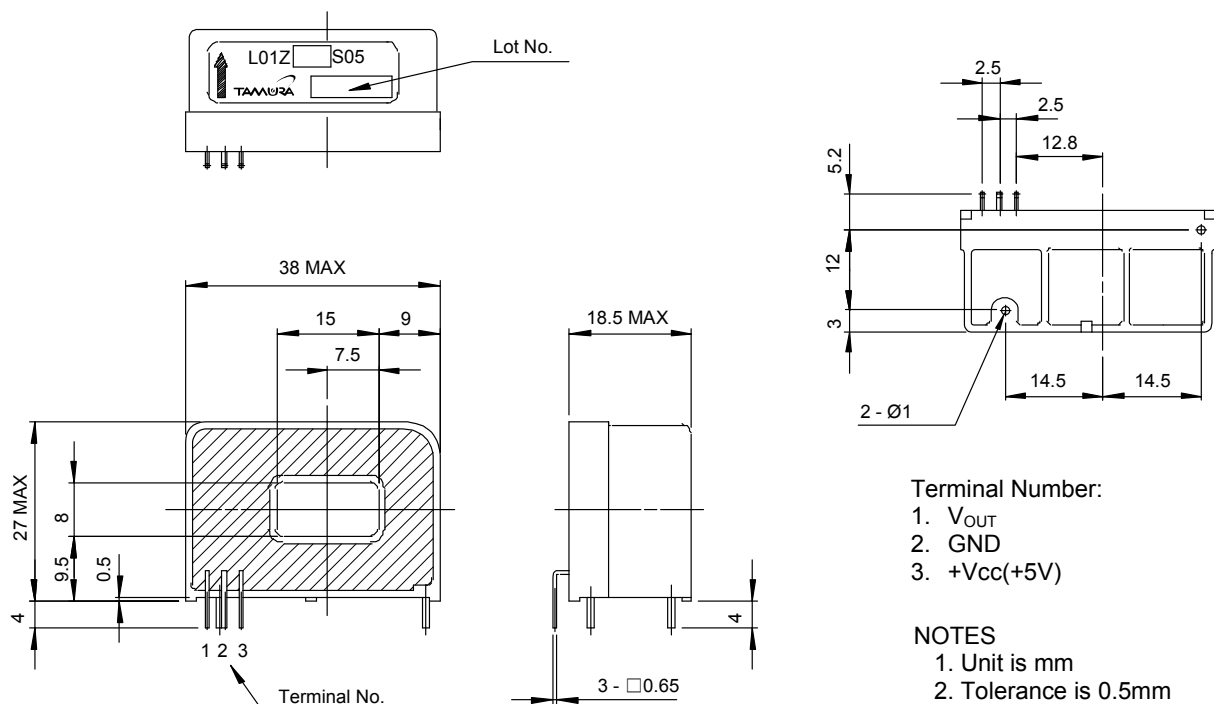
⁴ Without Thermal drift of offset

Electrical Performances

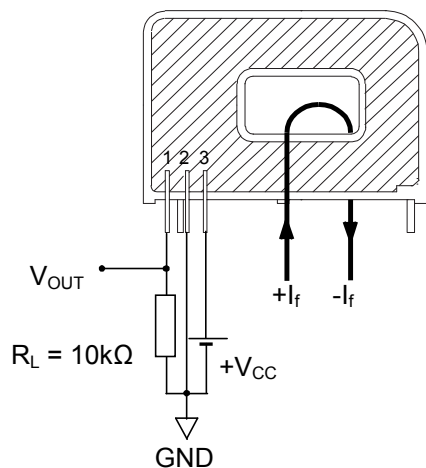


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Mechanical dimensions



Electrical connection diagram



Package & Weight Information

Weight	Pcs/box	Pcs/carton	Pcs/pallet
45g	50	200	4800

