

# 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

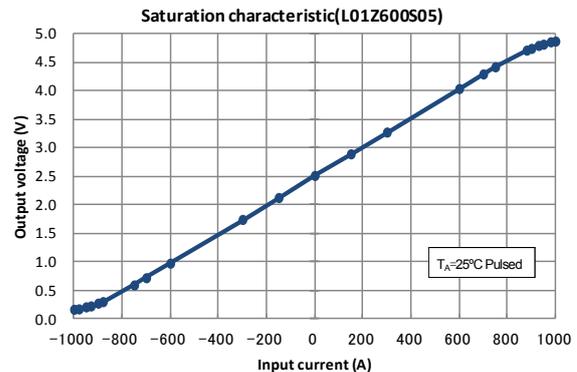
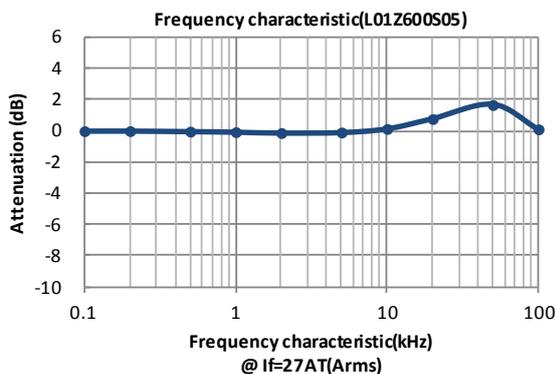
 $T_A=25^{\circ}\text{C}$ ,  $V_{CC}=+5\text{V}$ ,  $R_L=10\text{k}\Omega$ 

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	$I_{fmax}$	$\geq \pm I_f \times 1.25$							
Rated output voltage (at $I_f$ )	$V_o$	$V_{of}+1.5\text{V}$ $\pm 0.045\text{V}$	$V_{of}+1.5\text{V} \pm 0.035\text{V}$						
Offset voltage <sup>1</sup> (at $I_f=0\text{A}$ )	$V_{of}$	$V_{REF}^1$ $\pm 0.035\text{V}$	$V_{REF}^1 \pm 0.030\text{V}$						
Saturation output voltage	$V_{o min/max}$	$V_{o min} \leq 0.5\text{V}$ , $4.5\text{V} \leq V_{o max}$							
Output linearity <sup>2</sup> (0A~ $I_f$ )	$\epsilon_L$	$\leq \pm 1\%$ (at $I_f$ )							
Power supply voltage	$V_{CC}$	$5\text{V} \pm 2\%$							
Consumption current	$I_{CC}$	$\leq 15\text{mA}$							
Response time <sup>3</sup>	$t_r$	$\leq 10\mu\text{s}$ (at $di/dt = 100\text{A} / \mu\text{s}$ )							
Thermal drift of gain <sup>4</sup>	$TcVo$	$\leq \pm 2\text{mV}/^{\circ}\text{C}$	$\leq \pm 1.5\text{mV}/^{\circ}\text{C}$						
Thermal drift of offset	$TcVof$	$\leq \pm 2\text{mV}/^{\circ}\text{C}$	$\leq \pm 1.0\text{mV}/^{\circ}\text{C}$						
Hysteresis error (at $I_f=0\text{A} \rightarrow I_f \rightarrow 0\text{A}$ )	$V_{OH}$	$\leq 8\text{mV}$			$\leq 4\text{mV}$		$\leq 6\text{mV}$		
Insulation voltage	$V_d$	AC2500V for 1minute (sensing current 0.5mA), inside of through hole $\leftrightarrow$ terminal							
Insulation resistance	$R_{IS}$	$\geq 500\text{M}\Omega$ (at DC500V), inside of through hole $\leftrightarrow$ terminal							
Ambient operation temperature	$T_A$	$-10^{\circ}\text{C} \sim +80^{\circ}\text{C}$							
Ambient storage temperature	$T_S$	$-15^{\circ}\text{C} \sim +85^{\circ}\text{C}$							

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

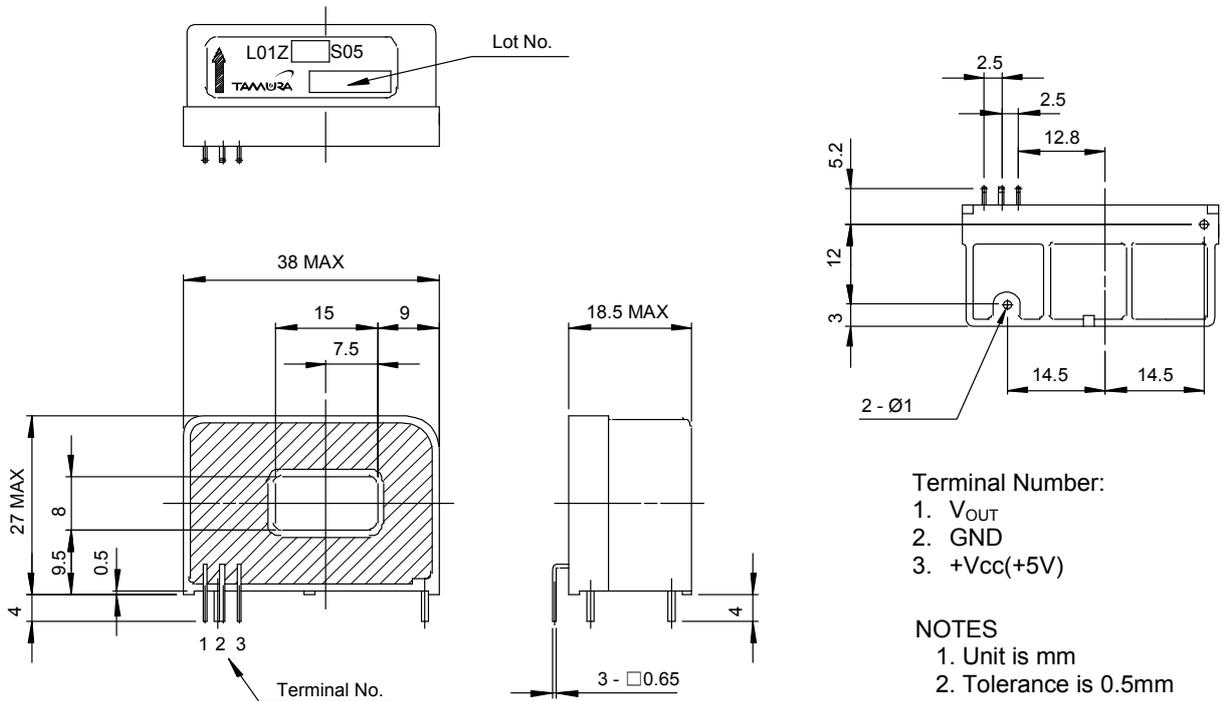
<sup>4</sup> Without Thermal drift of offset

## Electrical Performances

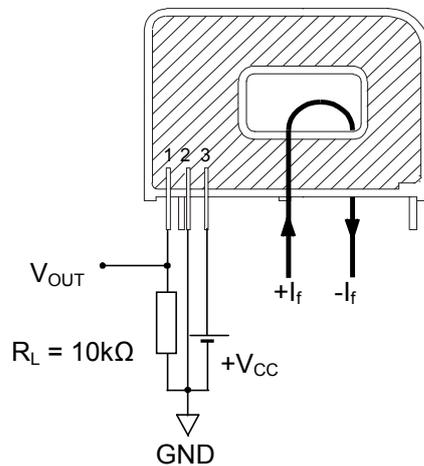


# Hall Effect Current Sensors L01Z\*\*\*S05 Series

## Mechanical dimensions

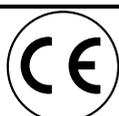


## Electrical connection diagram



## Package & Weight Information

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



# Mouser Electronics

Authorized Distributor

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

[Tamura:](#)

[L01Z050S05](#) [L01Z100S05](#) [L01Z150S05](#) [L01Z200S05](#) [L01Z300S05](#) [L01Z400S05](#) [L01Z500S05](#) [L01Z600S05](#)