



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Hall Effect Current Sensor S29S1T0D24Z



Features:

- Closed Loop type
- Current or voltage output
- Conversion ratio K = 1:5000
- Panel mounting with Molex 5566-04A-210.
- Large Aperture
- Insulated plastic case according to UL94V0

Advantages:

- Excellent accuracy and linearity
- Very low temperature drift
- No insertion loss
- High Immunity to external interferences
- Optimised response time
- Wide supply voltage range

Specifications

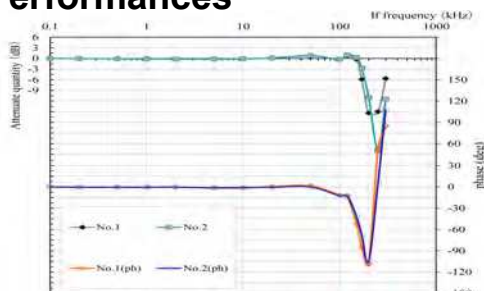
$T_A=25^{\circ}\text{C}$, $V_{CC}=\pm 24\text{V}$

Parameters	Symbol	S29S1T0D24Z		
Rated Current	I_f	1000A		
Maximum Current	I_{fmax}	$\pm 2100\text{A}$ (see below)		
$I_f = \pm A_{DC}$ Measuring resistance @ 85°C	R_M	$\pm 15\text{V}$	70°C	1000A : $0\Omega \sim 21\Omega$ 1200A : $0\Omega \sim 9\Omega$ 1300A : $0\Omega \sim 5\Omega$
			85°C	1000A : $0\Omega \sim 18\Omega$ 1200A : $0\Omega \sim 7\Omega$
		$\pm 24\text{V}$	70°C	1000A : $0\Omega \sim 60.5\Omega$ 1800A : $0\Omega \sim 14\Omega$ 2100A : $0\Omega \sim 4\Omega$
			85°C	1000A : $10\Omega \sim 58.5\Omega$ 1800A : $10\Omega \sim 12\Omega$
Conversion Ratio	K	1 : 5000		
Output Current	I_{OUT}	$\pm 200\text{mA}$		
Offset Current	I_{OE}	$\leq \pm 0.4\text{mA}$ @ $I_f = 0\text{A}^1$		
Output Current Accuracy	X	$I_{OUT} \pm 0.4\%$ (without I_{of})		
Output Linearity	ϵ_L	$\leq \pm 0.1\%$ @ I_f		
Supply Voltage	V_{CC}	$\pm 15\text{V} \sim \pm 24\text{V}$ ($\pm 5\%$)		
Consumption Current	I_{CC}	$\pm 35\text{mA}$ (Output Current is not included)		
Response Time ²	t_r	$< 1.0\mu\text{s}$ @ $di/dt = 100\text{A} / \mu\text{s}$		
Output Temperature Characteristic	TCI_{OUT}	$< \pm 0.01\%$ / $^{\circ}\text{C}$ @ I_f (without TCI_{OE})		
Offset Temperature Characteristic	TCI_{OE}	$\leq \pm 0.8\text{mA}$ max @ $I_f = 0\text{A}$		
Hysteresis allowance	I_{OH}	$\leq 0.2\text{mA}$ ($0\text{A} \leftrightarrow 3 \times I_f$)		
Insulation Withstanding	V_d	AC 4000V, for 1minute (sensing current 0.5mA), inside of aperture \leftrightarrow terminals		
Insulation Resistance	R_{IS}	$> 500\text{M}\Omega$ (@ DC 500V) inside of aperture \leftrightarrow terminals		
Frequency Bandwidth	f	DC .. 100 kHz		
Secondary Coil Resistance	R_S	48 Ω @ $T_A = 70^{\circ}\text{C}$ 50 Ω @ $T_A = 85^{\circ}\text{C}$		
Operating Temperature	T_A	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$		
Storage Temperature	T_S	$-40^{\circ}\text{C} \sim +90^{\circ}\text{C}$		

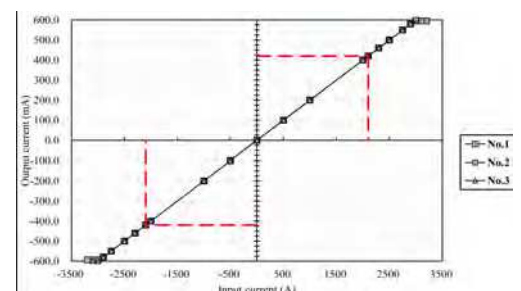
¹ Offset current value is after removal of core hysteresis — ² Time between 90% input current full scale and 90% of sensor output full scale

Electrical Performances

Frequency Characteristics

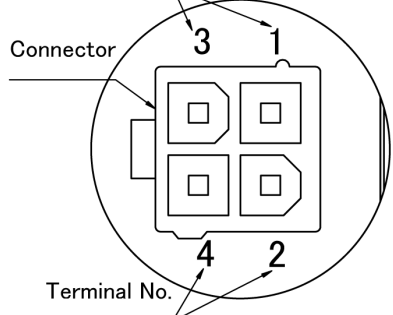
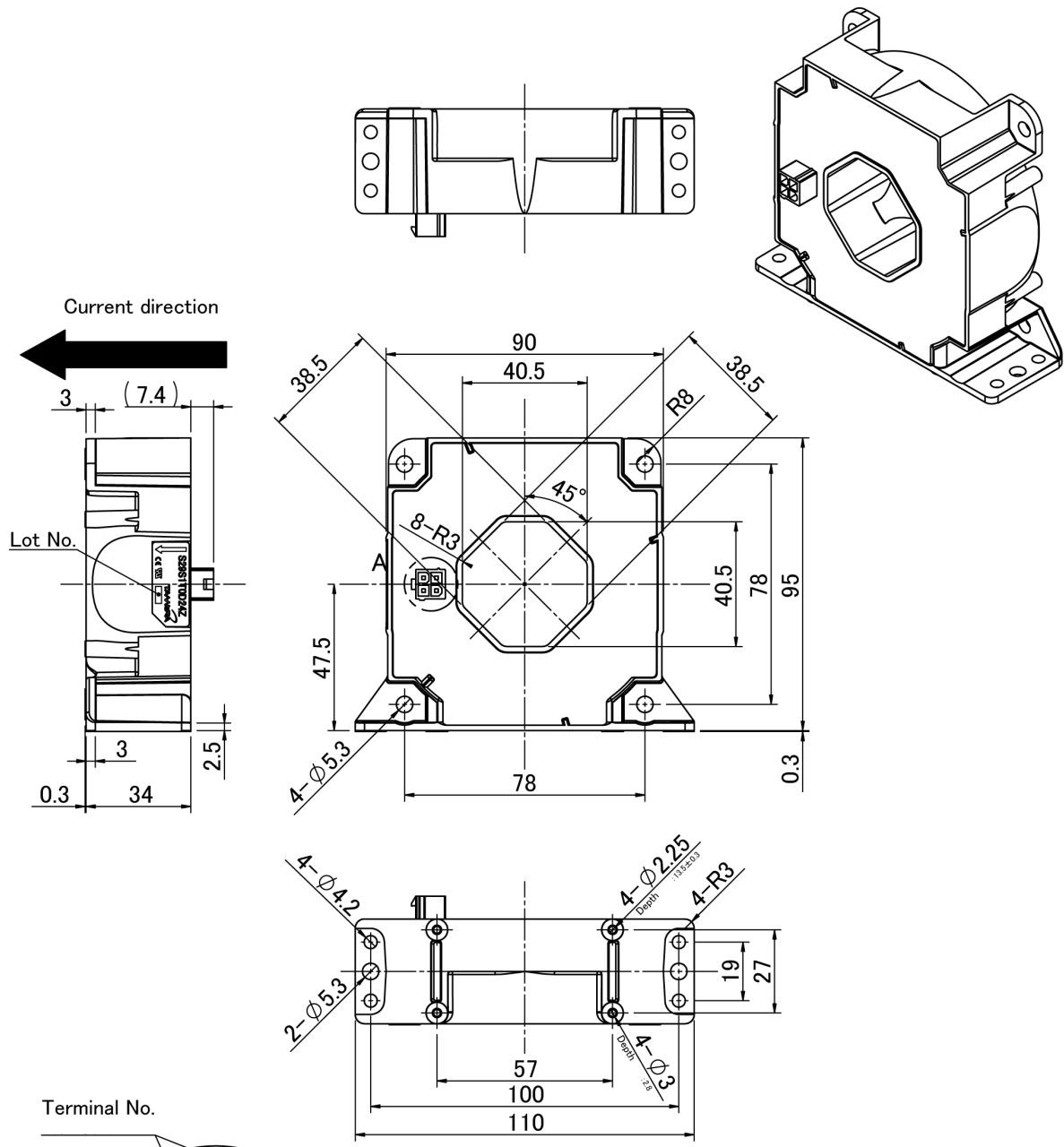


Saturation Characteristics



Hall Effect Current Sensor S29S1T0D24Z

Mechanical dimensions in mm



Tolerance : ± 0.5
Unit : mm

- Terminal No.
1. NC
 2. +Vcc
 3. -Vcc
 4. Iout

Connector	
Maker	Molex
Part No.	5566-04A-210 (39-28-8040)

Detail A (2:1)

Plating of terminal : Sn

Weight : 560g

*Unless specified, tolerance shall be ± 0.5 mm