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 Sensors L31S***S05FS Series

Features:

- Open Loop type
- Panel mounting
- Unipolar power supply
- Ferrite core
- Sulfur tolerant sensors (Resistors:Gold internal Electrodes)
- Insulated plastic case according to UL94V0
- UL Recognition

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

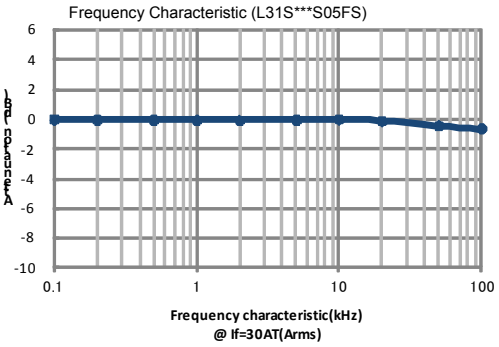
Specifications

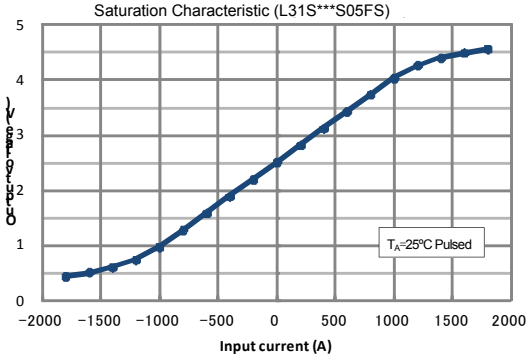
T_A=25ºC, V_{CC}=+5V, R_L=10kΩ

Parameters	Symbol	L31S050S05FS	L31S100S05FS	L31S200S05FS	L31S300S05FS	L31S400S05FS	L31S500S05FS	L31S600S05FS
Primary nominal current	I_f	50A	100A	200A	300A	400A	500A	600A
Saturation current	I_{fmax}	≥ ±150A	≥ ±300A	≥ ±600A	≥ ±900A	≥ ±900A	≥ ±900A	≥ ±900A
Rated output voltage	V_o	Vof+0.625V ± 0.015V (at If)						
Offset voltage[1]	V_{of}	V_{REF} ± 0.025V (at If = 0A)						
Reference voltage	V_{REF}	2.5V ± 0.020V						
Output Linearity[2] (0A, 0.5I_f , I_f)	ε_L	≤ ± 0.5% (at If)						
Power supply voltage	V_{CC}	+ 5V ±5 %						
Consumption current	Icc	≤ 15mA						
Response time[3]	t_r	≤ 5μs (at di/dt = 100A / μs)						
Thermal drift of gain[4]	TcVo	≤ ± 1.5mV/ºC						
Thermal drift of offset	TcVof	≤ ± 1.0 mV/ºC (at If = 0A)			≤ ± 0.3 mV/ºC (at If = 0A)			
Thermal drift of reference	TcVref	≤ ± 0.012% / ºC						
Hysteresis error (at If=0A→If→0A)	V_{OH}	≤ 10mV			≤ 2.5mV			
Insulation voltage	V_d	AC3300V 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 temperature	T_A	-40ºC~+85ºC						
Ambient storage temperature	T_S	-40ºC~+85ºC						

[1] After removal of core hysteresis— [2] Without offset —[3] Time between 10% input current full scale and 90% of sensor output full scale — [4] Without Thermal drift of offset

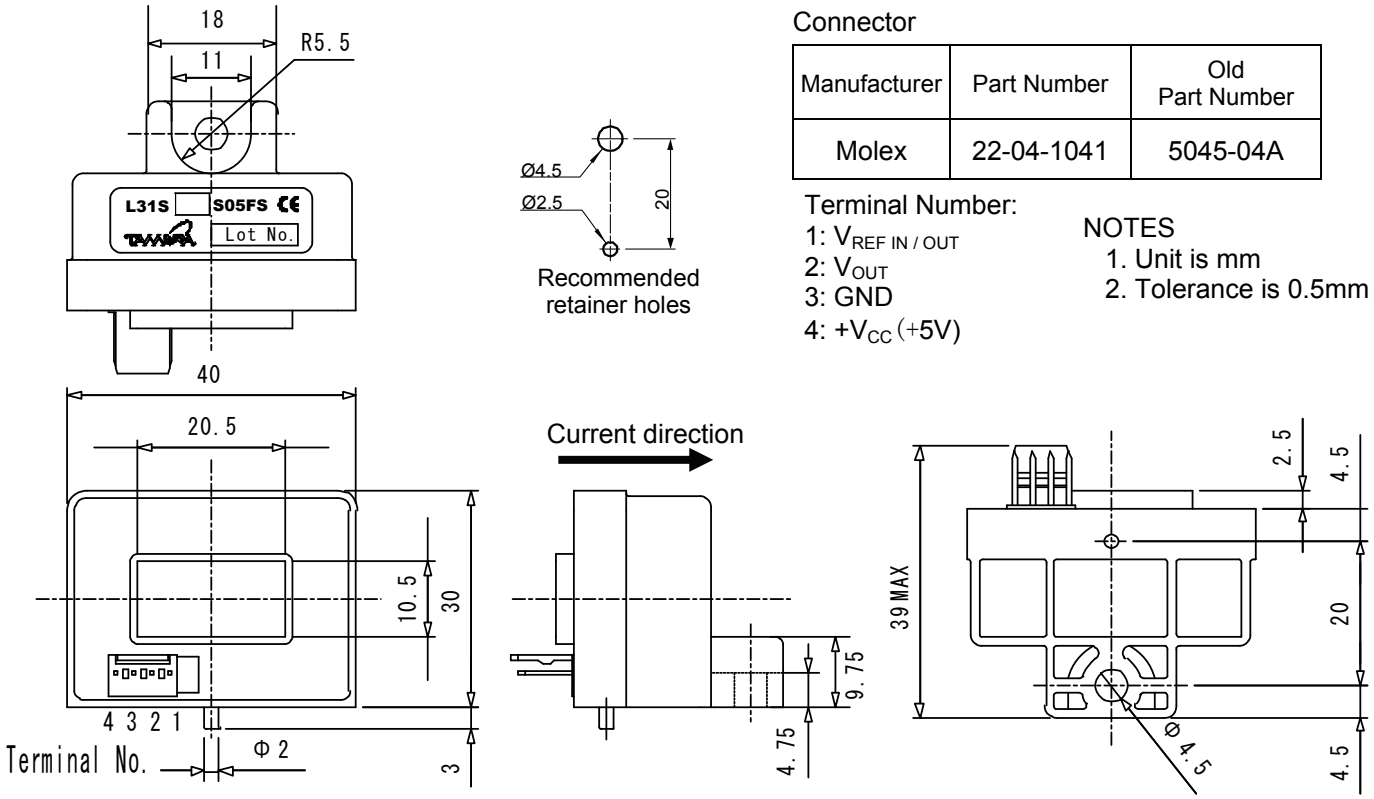
Electrical Performances





Hall Effect Current Sensors L31S***S05FS Series

Mechanical dimensions in mm



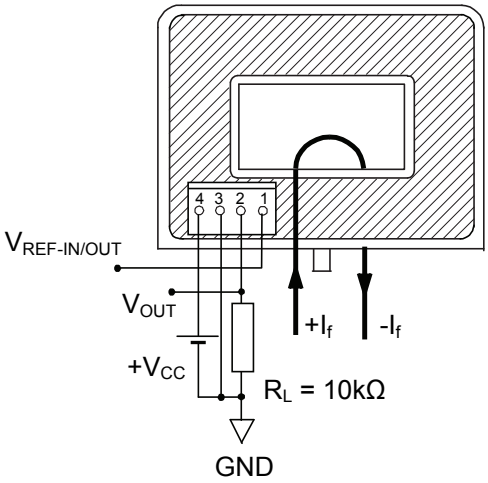
Connector

Manufacturer	Part Number	Old Part Number
Molex	22-04-1041	5045-04A

Terminal Number:
1: $V_{REF\ IN\ /\ OUT}$
2: V_{OUT}
3: GND
4: $+V_{CC}$ (+5V)

NOTES
1. Unit is mm
2. Tolerance is 0.5mm

Electrical connection diagram



UL Standard

UL 508 , CSA C22.2 No.14
(UL FILE No.E243511)

- For use in Pollution Degree 2 Environment.
- Maximum Surrounding air temperature rating, 85˚C.

Package & Weight Information

Weight	Pcs/box	Pcs/carton	Pcs/pallet
37g	20	200	3600