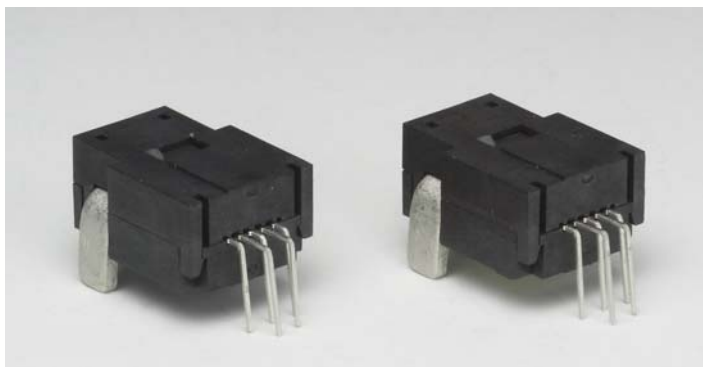


Power supply 3.3V ! & Compact current sensors LA02/LA03 Series (Open loop type - ASIC model)

Coming soon

Power supply is 3.3V(LA02 Series) or 5.0V(LA03 Series).
Sufficient creepage distance : 13.3mm. Suitable for replacement sensors from the shunt resistance & isolation amplifier method with consumer products and smart meter.



Features

- Low profile package(9.2mm on PCB)
- Only 22.8*14.4mm as surface occupied on the PCB
- Ferrite core is used. Heat generation due to high-frequency current is reduced.
- Through-hole type, 8 models in two series
- Open loop type - ASIC model
- Creepage & Clearance distance : 13.3mm
- Standards : UL508,
IEC60950/62109(being reviewed)

General characteristics

- Unipolar power supply : LA02P series +3.3V
LA03P series +5.0V
- Offset voltage : $V_{CC}/2$ (ratiometric)
- Sensitivity range : LA02P series 100-25 mV/A
LA03P series 62.5-15.5 mV/A
- Measurement current range : 21A, 35A, 54A, 85A
(Pulse current)
- Maximum effective current : 50 Arms

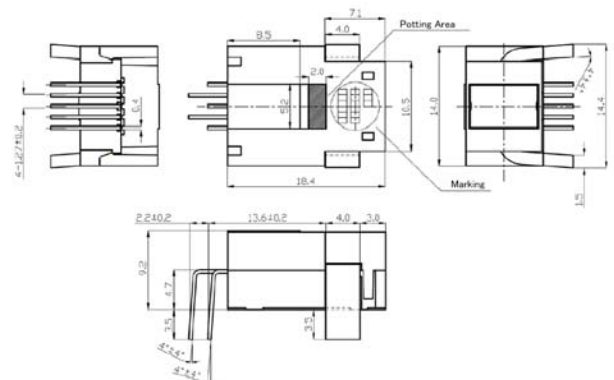
SPECIFICATIONS

The standard is different depending on the model.

$T_a=25^\circ\text{C}$, $R_L \geq 10\text{M}\Omega$

Parameters	Symbol	LA02P054S05	LA03P054S05
Supply Voltage	V_{CC}	3.3V \pm 10%	5.0V \pm 10%
Measurement current range	I_{fmax}	\pm 54A	
Maximum primary current	$I_{p(RMS)max}$	50Arms	
Sensitivity	Gth	24.5mV/A (Gain 1.323V at I_{fmax})	40mV/A (Gain 2.16V at I_{fmax})
Offset Voltage(at $I_f=0\text{A}$)	Vof	1.650V \pm 0.014V	2.500V \pm 0.020V
Sensitivity error	ϵ_G	$\leq \pm 1.3\%$	$\leq \pm 1.0\%$
Output Linearity	ϵ_L	$\leq \pm 1.0\%$ FS	
di/dt response time (at 90% of I_f)	t_r	1 μ S typ	
Frequency bandwidth	f	DC ~ 300 kHz	
Temp drift of Sensitivity	TCG	$\pm 0.4\%$ typ	$\leq \pm 0.5\%$ typ
Temp drift voltage of Vof	TcVof	3.5mV typ	8.0mV typ
Insulation voltage	V_d	AC 3.0kV for 1minute,	
Ambient operating temp	T_A	-40 $^\circ\text{C}$ ~ +110 $^\circ\text{C}$	

Outline drawing (mm)



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May 12, 2014