



KA-001  
KA-002

[github.com/Phelma-BE2](https://github.com/Phelma-BE2)

## 4-level 10mV→10V logarithmic display

### FEATURES

- Differential input
- Wide input voltage: 10mV..10V
- Large input impedance: > 10GΩ
- Large Bandwidth: 50Hz..800kHz
- Input high-voltage protection up to 100V
- Symmetric supply voltage: ±15V
- Compact module : 30x50x10mm

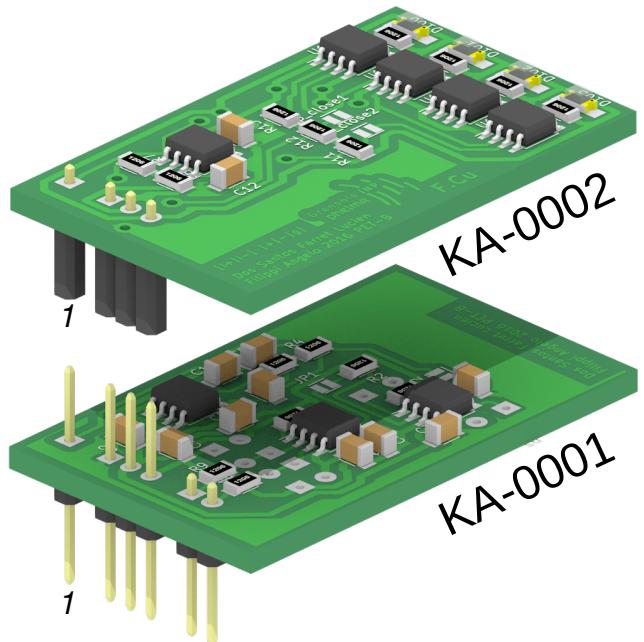


Figure.1 stackable KA-001 & KA-002 modules.

### KA-001 & KA-002 Pinouts

Pin number	Name	Type*	Description
1	Mean_Out	AO	Internal signal between KA-001 and KA-002 modules.
2	GND	P	Power supply ground
3	VSS	P	Negative power supply -15V
4	VCC	P	Positive power supply +15V
5	IN-	AI	Negative differential input
6	IN+	AI	Positive differential input

Table.1 KA-001 and KA-002 pinouts.

\* OA : analog output, P : power, AI : analog input

### Absolute Maximum Ratings

Parameter	Maximum value
Supply Voltage	±18V*
Voltage on input pins 5 & 6	100V*

Table.2 Absolute maximum ratings

\* Theorical limits

DC Electrical Characteristics				
Parameter	Min	Typ	Max	Units
Supply Voltage Vss/Vcc		±15		V
Current consumption				
• 0 leds		13		
• 1 leds		18.5*		
• 2 leds		21*		
• 3 leds		23.5*		
• 4 leds		26*	59*	
Peak-to-Peak Differential input amplitude limit (sinewave)	-10.16V*	$\frac{1.2 \cdot 10^6}{\pi f}$	+10.16V*	V
Peak-to-peak input amplitude threshold				
• Led 1		12		
• Led 2		88		mV
• Led 3		1.15		
• Led 4		10.3		V

Table.3 DC Electrical Characteristics

\* Theorical values

AC Electrical Characteristics				
Parameter	Min	Typ	Max	Units
Input frequency limits	50		40k	Hz

Table.4 AC Electrical Characteristics

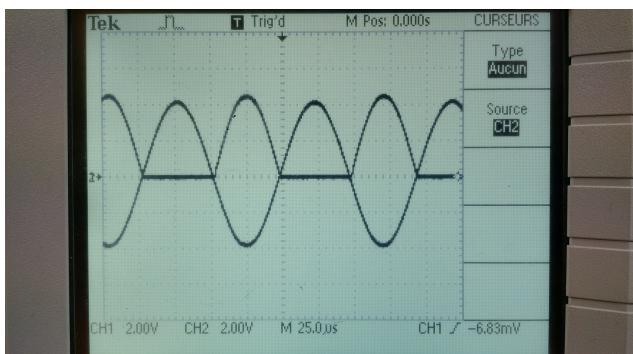


Figure.2 positive clipping circuit output

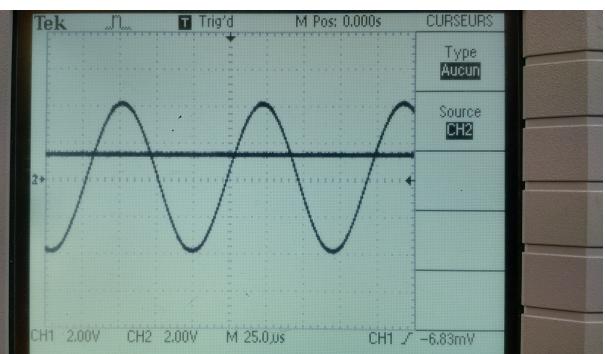


Figure.3 low pass filter output

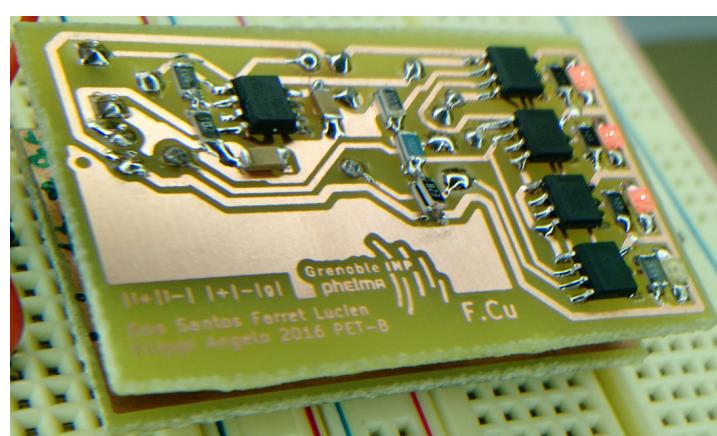


Figure.4 Assembled modules



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