# DATA SHEET
# Leakage Current Sensor

| P/N: CHF_LSC5S2 | $I_{PN}$=0.1~2A |
|---|---|

## Feature

- The CHF_LSC5S2 series AC/DC leakage current sensor is a new type of open-loop flux gate current sensor developed using the principle of flux gate.
- It provides an economical and accurate solution for AC, DC, and pulse leakage current sensing.
- It has high current isolation between the primary and secondary circuits.
- It has good stability in measuring small currents. It can detect small AC and DC leakage currents<1mA.
- This product has undergone 168 hours of room temperature aging and 8 hours of high temperature aging treatment, maintaining excellent performance and stable operation under harsh working conditions.
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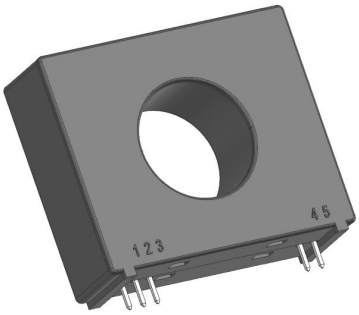
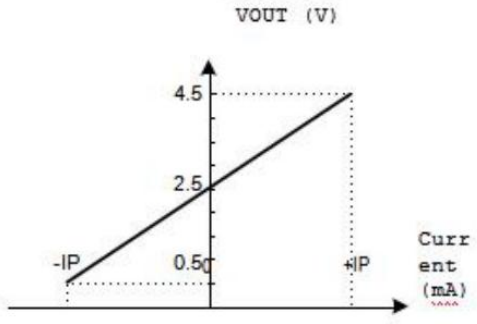
- Supply voltage: DC +5.0V




## Advantages

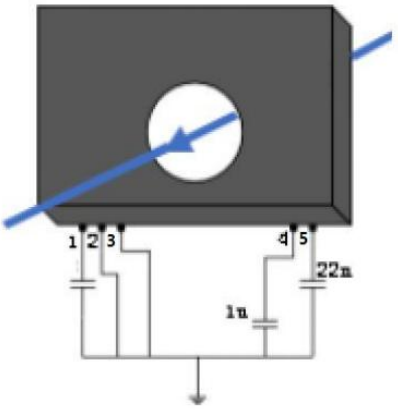
- Small sizes, compact design
- Wide Frequency,current
- High immunity to external
- High overload capacity
- High insulation capacity
- No insertion losses

## Applications

- Retrograde leakage detection
- Leakge detetion of EV charging station
- PV inverter

CE

RoHS



## Electrical data:

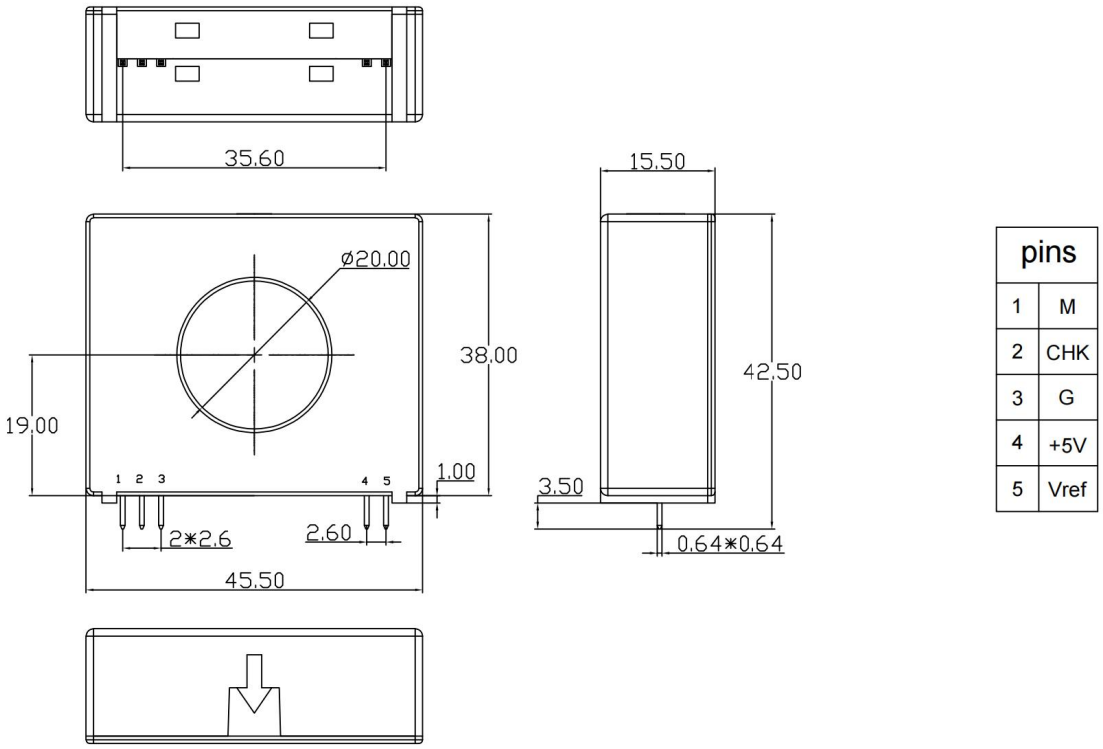
| Parameter<br>Ref | CHF01LSC5S2 | CHF03LSC5S2 | CHF06LSC5S2 | CHF10LSC5S2 | CHF20LSC5S2 |
|---|---|---|---|---|---|
| Rated input Ipn(A) | 0.1 | 0.3 | 0.6 | 1 | 2 |
| Measuring range Ip(A) | 0～±0.3 | 0～±0.6 | 0～±0.85 | 0～±1.5 | 0～±3.0 |
| Rated output voltage $V_M$(V) | 2.5+2*$I_{PN}/I_P$ | | | | |
| Supply voltage $V_{CC}$ | DC+5V | | | | |
| Power supply voltage error $V_{RCC}$ | ±0.5V | | | | |
| Max Instantaneous allowable current $I_P$ (A) | @1 pulse, 100us | 100A | | | |
| Output current source $I_{IOUT(Source)}$ | 5mA | | | | |
| Output minimum current $I_{IOUT(Sink)}$ | 5mA | | | | |
| Current consumption IC | 25mA | | | | |
| Accuracy (%FS) | @$I_{PN}$, T=25℃ | ≤2 | | | |
| Zero offset voltage $V_{OE}$(mV) | @ $I_P$=0, T=25℃ | <±25 | | | |
| Offset voltage drift $V_{OT}$(mV/℃) | @ $I_P$=0, -20℃～+80℃ | <±2 | | | |
| Linearity $\varepsilon_r$(%FS) | ≤1 | | | | |
| Bandwidth(HZ) | @-3dB | DC～700 | | | |

## General data:

| Parameter | Value |
|---|---|
| Operating temperature TA(℃) | -40 ~ +85 |
| Storage temperature TS(℃ ) | -55~ +105 |
| Mass M(g ) | 22 |
| Plastic material | PBT G30/G15, UL94- V0; |
| Standards | IEC60950-1:2001 |
| | EN50178:1998 |
| | SJ20790-2000 |

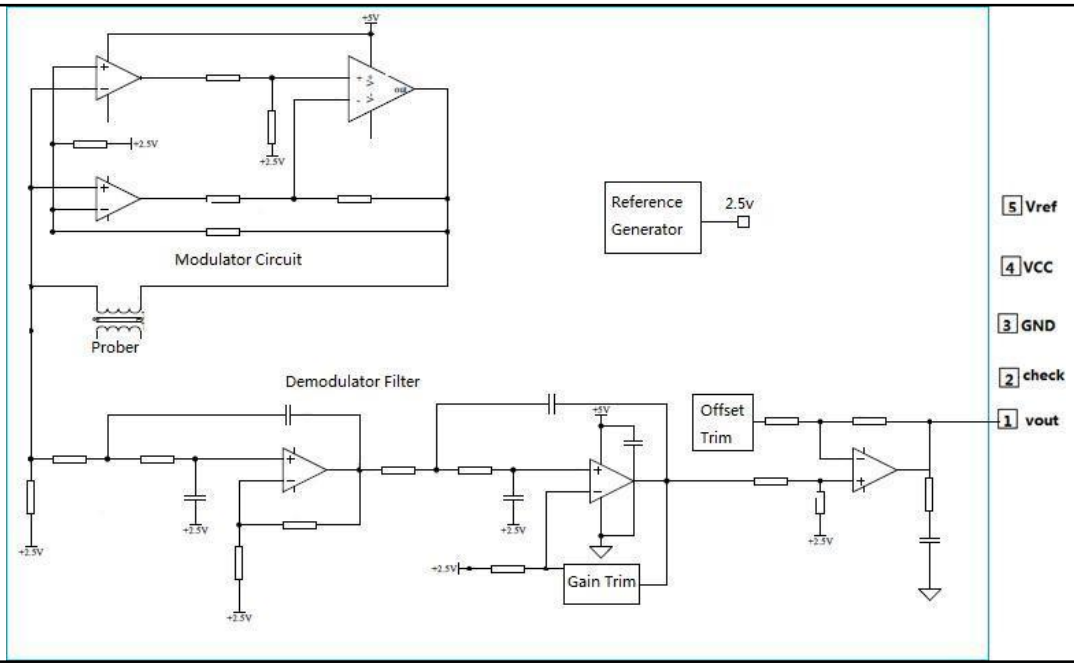
## Dimensions(mm):

**Structure diagram**




| pins | |
|---|---|
| 1 | M |
| 2 | CHK |
| 3 | G |
| 4 | +5V |
| 5 | Vref |

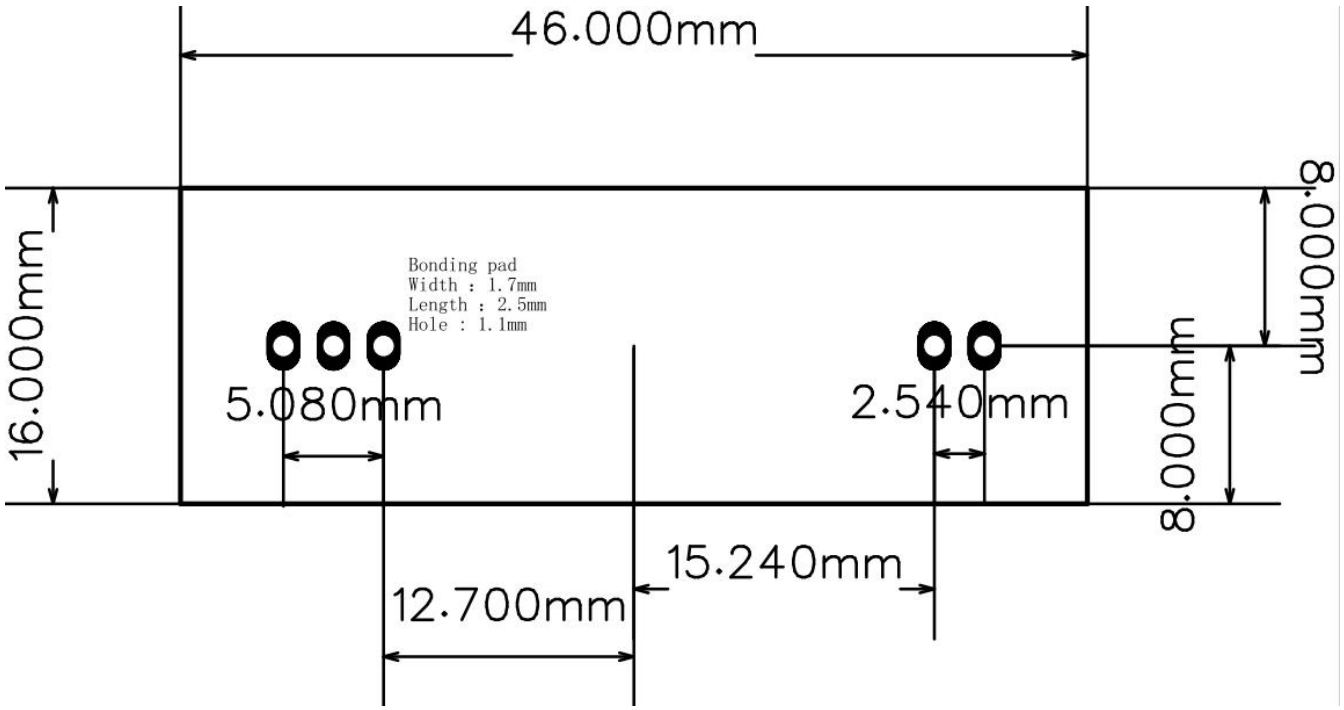
**Connection**




General tolerance

General tolerance:< ±0.2mm
Primary through-hole: D 20±0.15

**PCB footprint**




**Remarks:**

- Please install according to the direction of the arrow in the structure diagram, and pay attention to the positive and reverse direction of current.
- Please wire according to the definition of the functional pin illustrated in the structure diagram (Note: the inaccurate way of installation may cause damage to the sensor).
- Temperature of the primary conductor should not exceed 100°C.
- This is a standard mode. We can provide the products according to your specifications.

**WARNING : Incorrect wiring may cause damage to the sensor.**