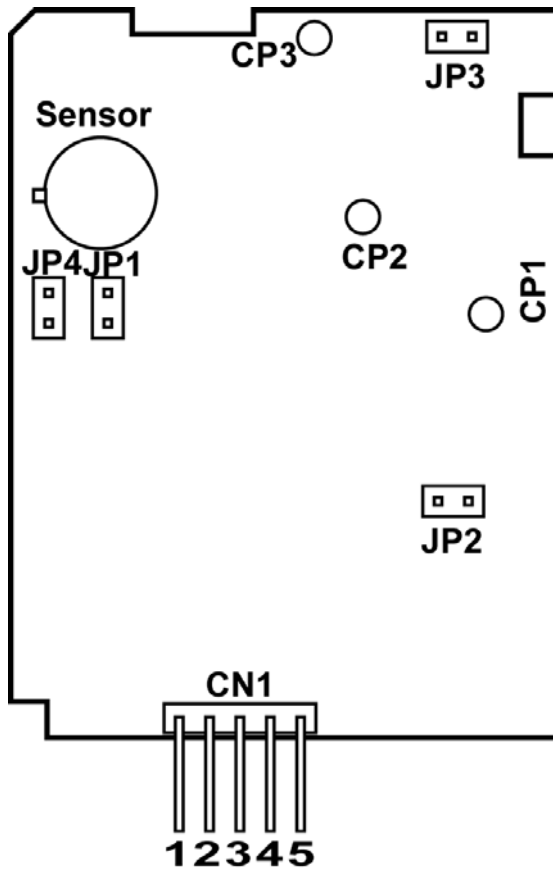


Evaluation Module for TGS2444 – EM2444

In order to simplify testing of the sensor, the output signal can be obtained continuously with this evaluation module. As the driving mode of TGS2444 is cyclic heater control and intermittent detection, the periodically sampled sensor response is converted into continuous output voltage of the same value through the software in the microprocessor.

A. Configuration



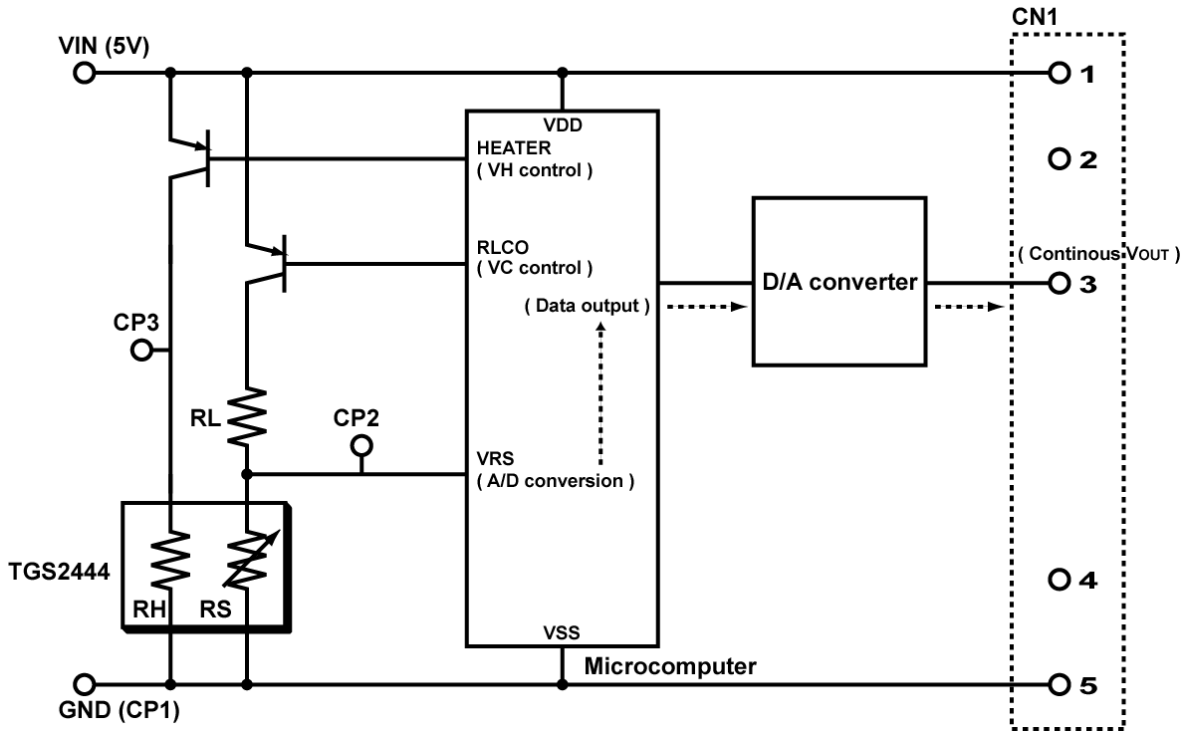
| | | |
|-----|-------------|--------------|
| JP1 | OPEN | SHORT |
| JP2 | OPEN | SHORT |
| JP3 | OPEN | SHORT |
| JP4 | OPEN | SHORT |

Please check jumper sockets as above.

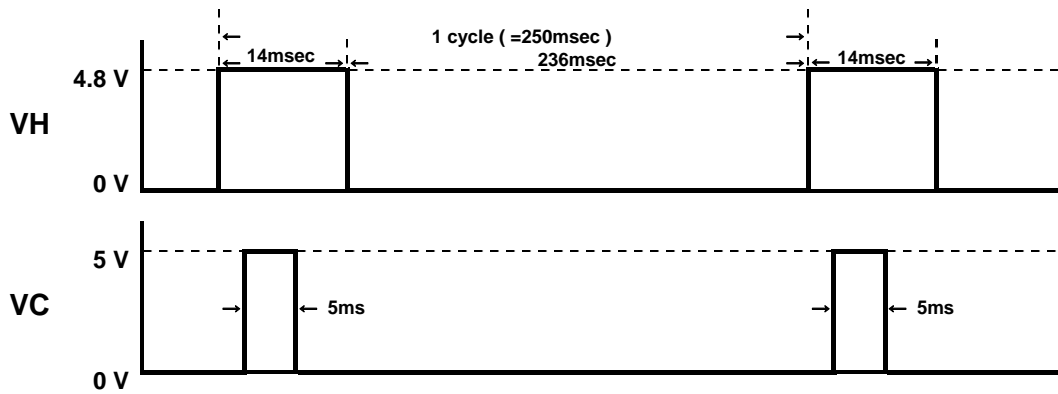
CN1 pin assignment

| No. | Name | Description | Specification |
|-----|-------|--------------------|----------------|
| 1 | VIN | Power supply input | DC 4.9 – 5.1 V |
| 2 | VOUT1 | NC | |
| 3 | VOUT2 | Sensor output | |
| 4 | VOUT3 | NC | |
| 5 | GND | Ground | |

B. Basic circuit



C. Timing chart



VOUT Sampling Point : 7ms after VH Power On

D. Calculation from measured VOUT to sensor resistance (RS)

$$RS = \frac{5.0 - V_{OUT}}{V_{OUT}} \times 10.0 \quad [k\Omega]$$

Note) The VOUT can be obtained by measuring the voltage between CN1 #5pin and #3pin (see “ CN1 pin assignment “). The input impedance of the equipment connected to the CN1 must be more than 1 Mohm in order to make precise data acquisition. The VOUT value update every 1 cycle (250 millisecond) .

E. Caution

a) Evaluation use only

Don't use this module except to evaluate TGS2444.

b) Power supply

Please apply correct voltage to #1 pin of the CN1. If much higher or negative voltage is applied, it probably causes malfunction of the module. Because this module doesn't have circuit to protect the ICs and the sensor.