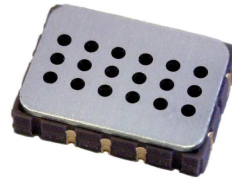




The MiCS-6814 is a compact MOS sensor with three fully independent sensing elements on one package.

The MiCS-6814 is a robust MEMS sensor for the detection of pollution from automobile exhausts and for agricultural/industrial odors.



Features

- Smallest footprint for compact designs (5 x 7 x 1.55 mm)
- Robust MEMS sensor for harsh environments
- High-volume manufacturing for low-cost applications
- Short lead-times

Detectable gases

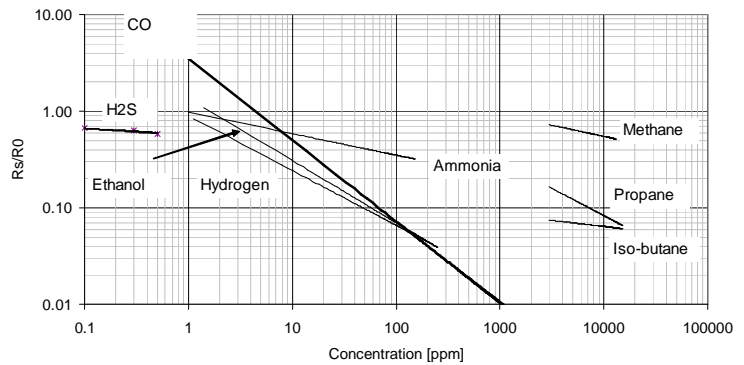
- | | | |
|--------------------|----------------------------------|--------------|
| • Carbon monoxide | CO | 1 – 1000ppm |
| • Nitrogen dioxide | NO ₂ | 0.05 – 10ppm |
| • Ethanol | C ₂ H ₅ OH | 10 – 500ppm |
| • Hydrogen | H ₂ | 1 – 1000ppm |
| • Ammonia | NH ₃ | 1 – 500ppm |
| • Methane | CH ₄ | >1000ppm |
| • Propane | C ₃ H ₈ | >1000ppm |
| • Iso-butane | C ₄ H ₁₀ | >1000ppm |

For more information please contact:

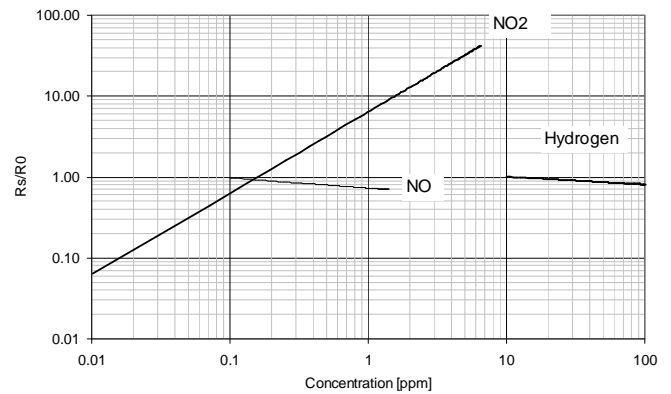
info.em@sgxsensortech.com

SGX Sensortech, Courtils 1
CH-2035 Corcelles-Cormondrèche
Switzerland

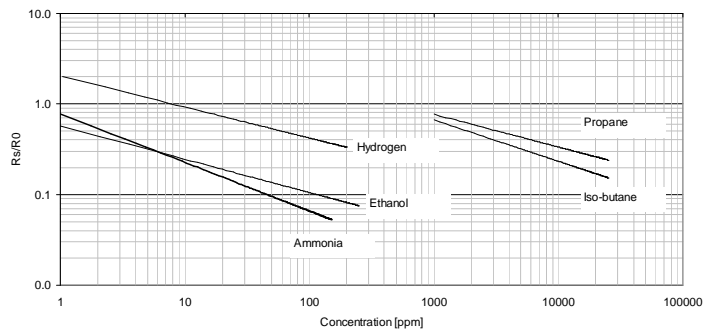
www.sgxsensortech.com



RED sensor, continuous power ON, 25°C, 50% RH



OX sensor, continuous power ON, 25°C, 50% RH



NH3 sensor, continuous power ON, 25°C, 50% RH

Performance RED sensor

| Characteristic RED sensor | Symbol | Typ | Min | Max | Unit |
|--|----------|-----|-----|------|-----------|
| Sensing resistance in air (see note 1) | R_0 | - | 100 | 1500 | $k\Omega$ |
| Typical CO detection range | FS | | 1 | 1000 | ppm |
| Sensitivity factor (see note 2) | S_{60} | - | 1.2 | 50 | - |

Performance OX sensor

| Characteristic OX sensor | Symbol | Typ | Min | Max | Unit |
|---|--------|-----|------|-----|-----------|
| Sensing resistance in air (see note 1) | R_0 | - | 0.8 | 20 | $k\Omega$ |
| Typical NO ₂ detection range | FS | | 0.05 | 10 | ppm |
| Sensitivity factor (see note 3) | S_R | - | 2 | - | - |

Performance NH3 sensor

| Characteristic OX sensor | Symbol | Typ | Min | Max | Unit |
|---|--------|-----|-----|------|-----------|
| Sensing resistance in air (see note 1) | R_0 | - | 10 | 1500 | $k\Omega$ |
| Typical NH ₃ detection range | FS | | 1 | 300 | ppm |
| Sensitivity factor (see note 4) | S_R | - | 1.5 | 15 | - |

Notes:

1. Sensing resistance in air R_0 is measured under controlled ambient conditions, i.e. synthetic air at $23 \pm 5^\circ\text{C}$ and $50 \pm 10\%$ RH for RED sensor and synthetic air at $23 \pm 5^\circ\text{C}$ and $\leq 5\%$ RH for OX sensor. Sampling test.
2. Sensitivity factor is defined as R_s in air divided by R_s at 60 ppm CO. Test conditions are $23 \pm 5^\circ\text{C}$ and $50 \pm 10\%$ RH. Indicative values only. Sampling test.
3. Sensitivity factor is defined as R_s at 0.25 ppm NO₂, divided by R_s in air. Test conditions are $23 \pm 5^\circ\text{C}$ and $\leq 5\%$ RH. Indicative values only. Sampling test.
4. Sensitivity factor is defined as R_s in air divided by R_s at 1 ppm of NH₃. Test conditions are $23 \pm 5^\circ\text{C}$ and $50 \pm 10\%$ RH. Indicative values only. Sampling test.