

TGS3830 Gas Sensor for the Detection of Freon(CFC s)

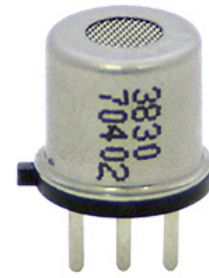
characteristic : _____

- * low power consumption
- * High sensitivity to R-134a
- * Responds very quickly to R-134a

The TGS3830 is a semiconductor gas sensor developed by Figaro using novel metal oxide technology, primarily designed for Freon detection. Its sensing element employs tin dioxide (SnO₂) semiconductors with low electrical conductivity that increases proportionally with rising concentrations of target gases in the air. A simple circuit converts these conductivity changes into corresponding gas concentration output signals. The ultra-miniature gas-sensitive bead, combined with a heater consuming merely 120mW, ensures high sensitivity. With exceptional responsiveness, the TGS 3830 demonstrates outstanding performance as an optimal low-cost portable refrigerant leak detector for R-134a (the superior alternative to R-12 used in air conditioners and refrigerators), making it the ideal sensor for portable refrigerant leak detection systems.

apply : _____

Portable refrigerant leak detector



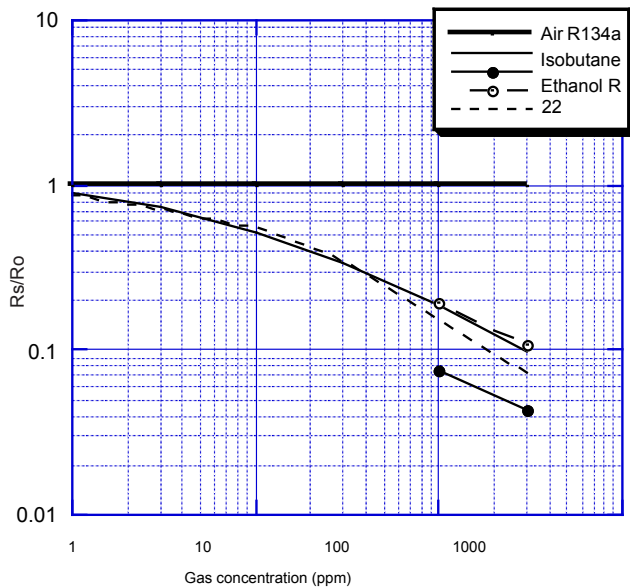
Sensitivity characteristics: _____

The representative sensitivity characteristic curve is shown in the figure below under standard test conditions (see back).

The vertical axis shows the sensor resistance ratio R_s / R_o , where R_s and R_o are defined as follows:

R_s = Sensor resistance in various gas concentrations

R_o = Sensor resistance in clean air



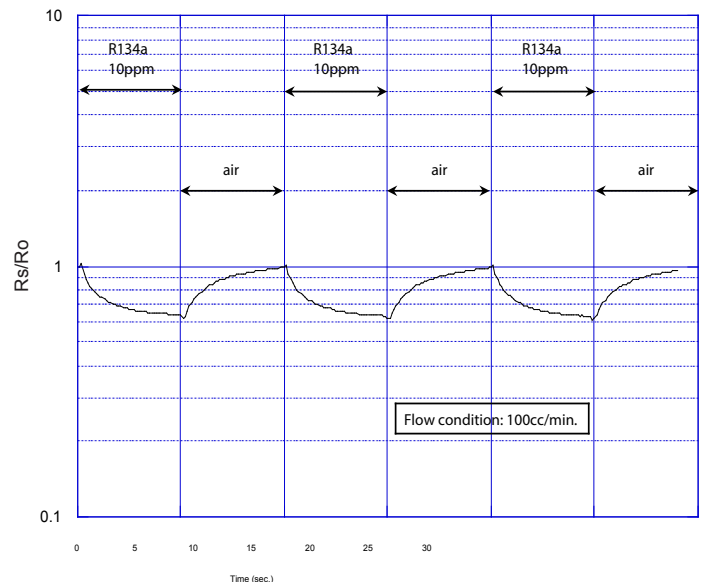
Gas response and repeatability: _____

The representative gas response and repeat curves measured at 100cc/min are shown in the figure below.

The vertical axis shows the sensor resistance ratio R_s / R_o , where R_s and R_o are defined as follows:

R_s = Sensor resistance in various gas concentrations

R_o = Sensor resistance in clean air



Important Notice: The application conditions for Figaro sensors may vary depending on specific customer requirements. Figaro strongly recommends consulting our technical team before use, particularly when the detected gas is not listed. Figaro assumes no liability for any usage that has not undergone professional testing by Figaro.