

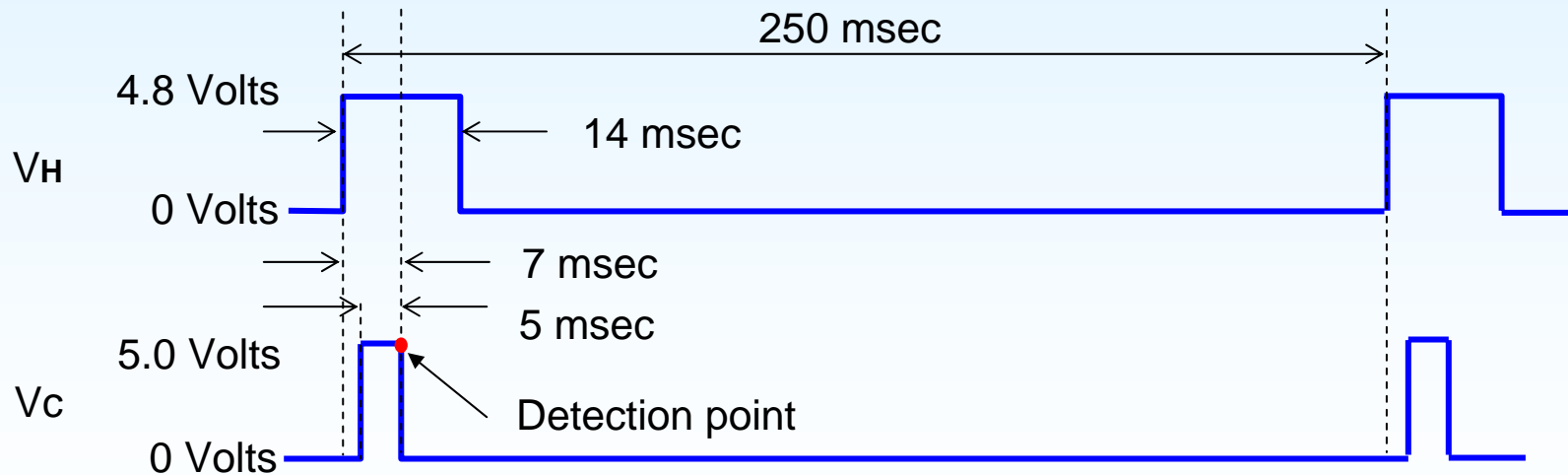
CONFIDENTIAL

# **Technical Data for TGS2444**

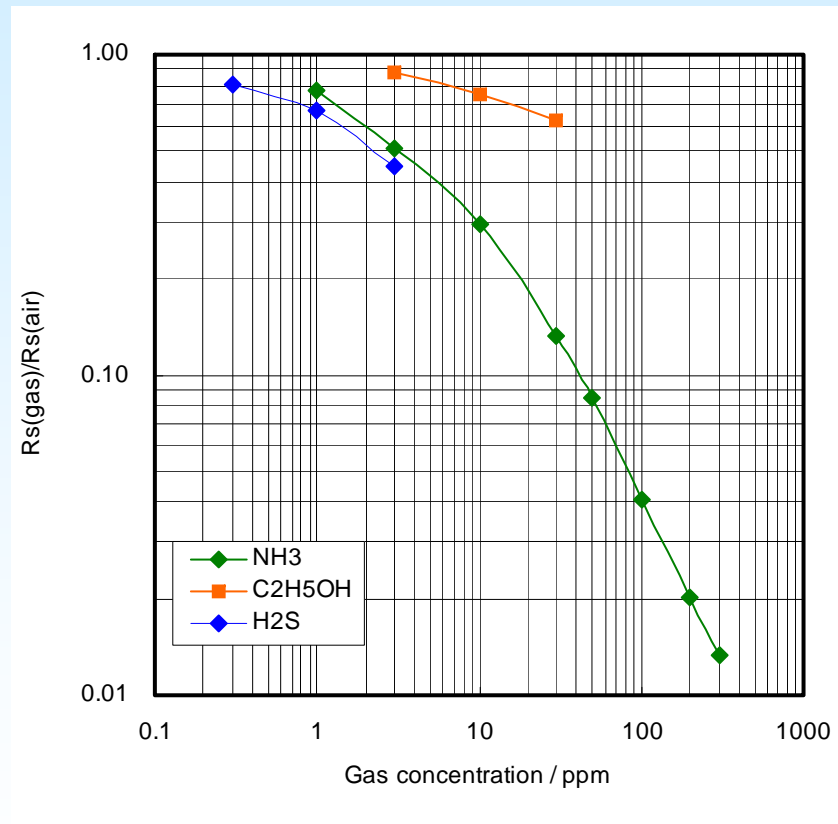
# Basic Measuring Conditions

Heater voltage cycle:  $V_{HH}=4.8$  Volts DC for 14 msec  
 $V_{HL}=0$  Volts for 236 msec

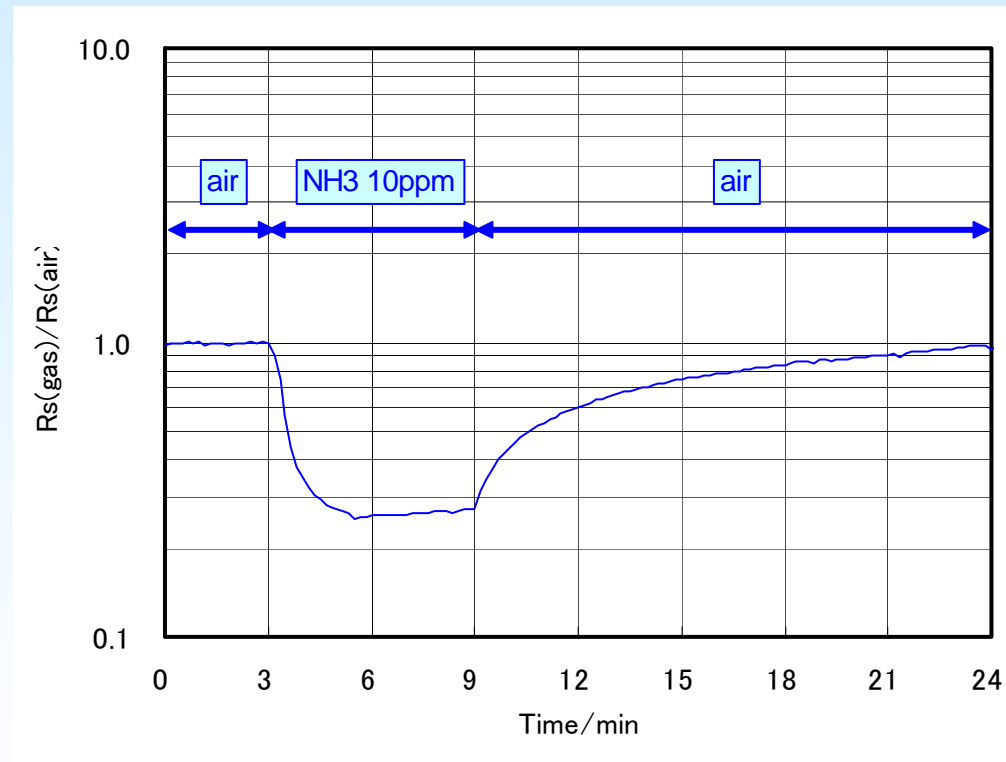
Circuit voltage cycle:  $V_c=0$  Volts for 245 msec  
 $V_c=5.0$  Volts DC for 5 msec



# Sensitivity Characteristics



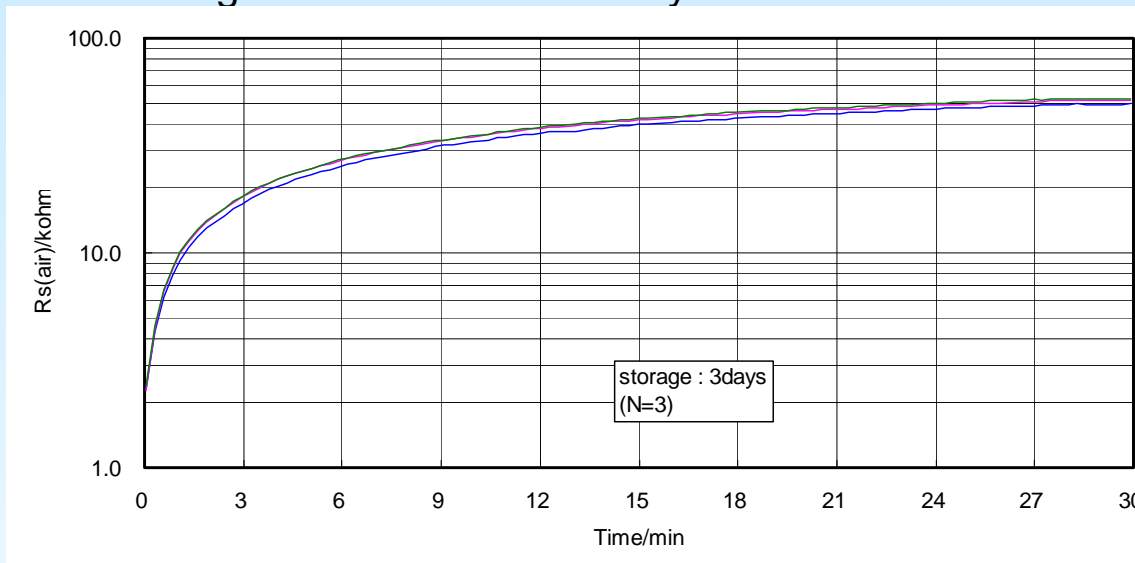
# Sensor Response Pattern



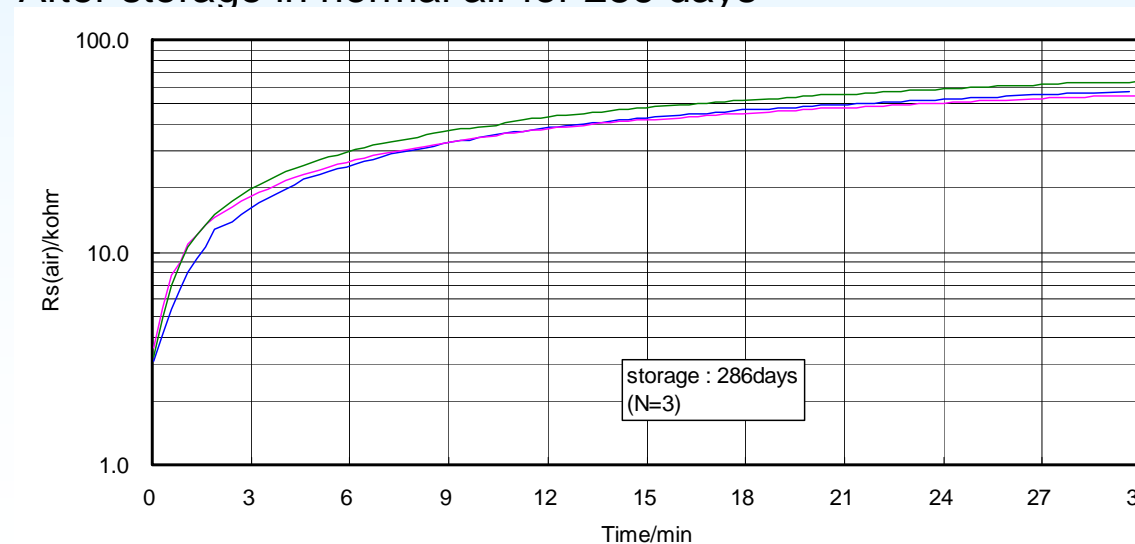
# Initial Action

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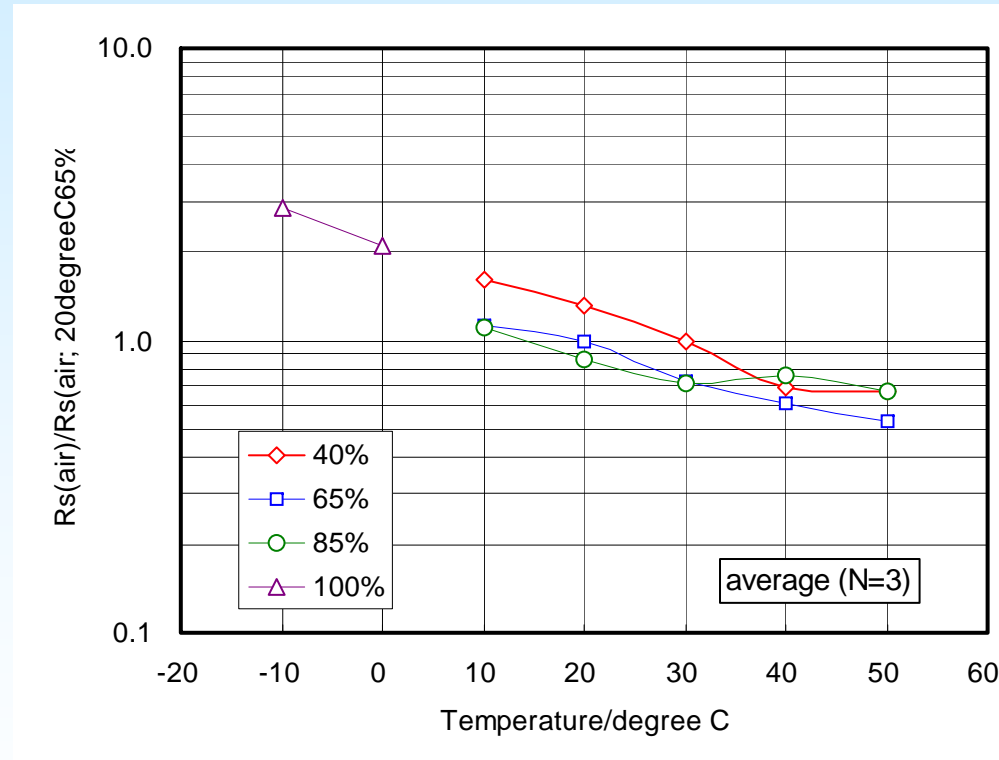
After storage in normal air for 3 days



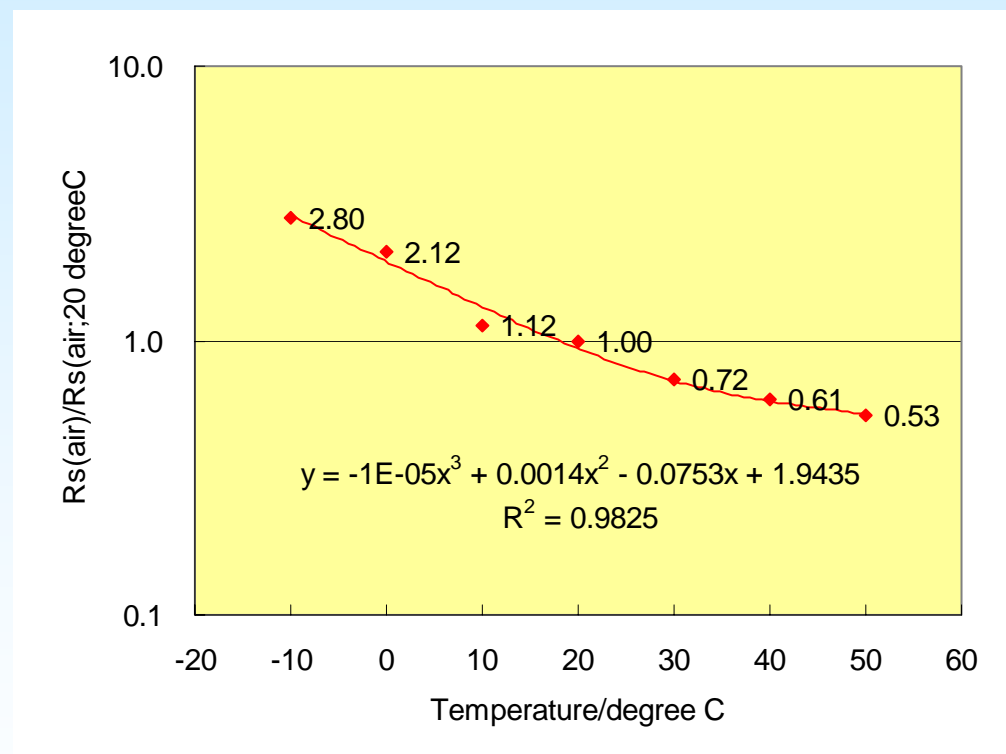
After storage in normal air for 286 days



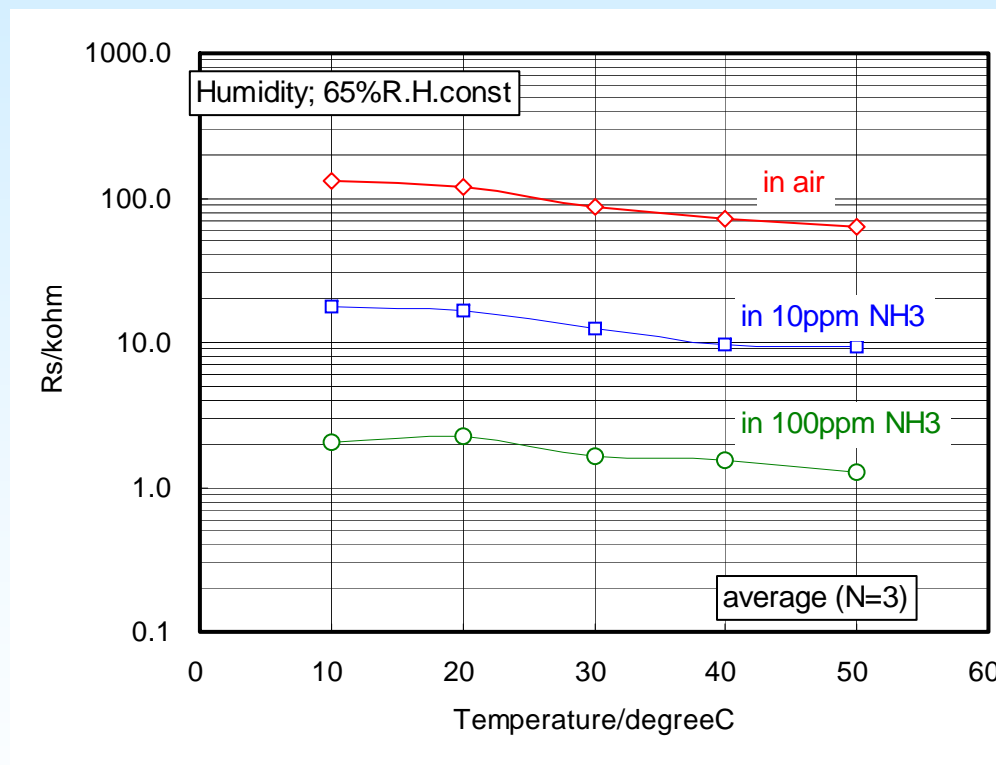
# Temperature Dependency



# Calculated Formula for Temperature

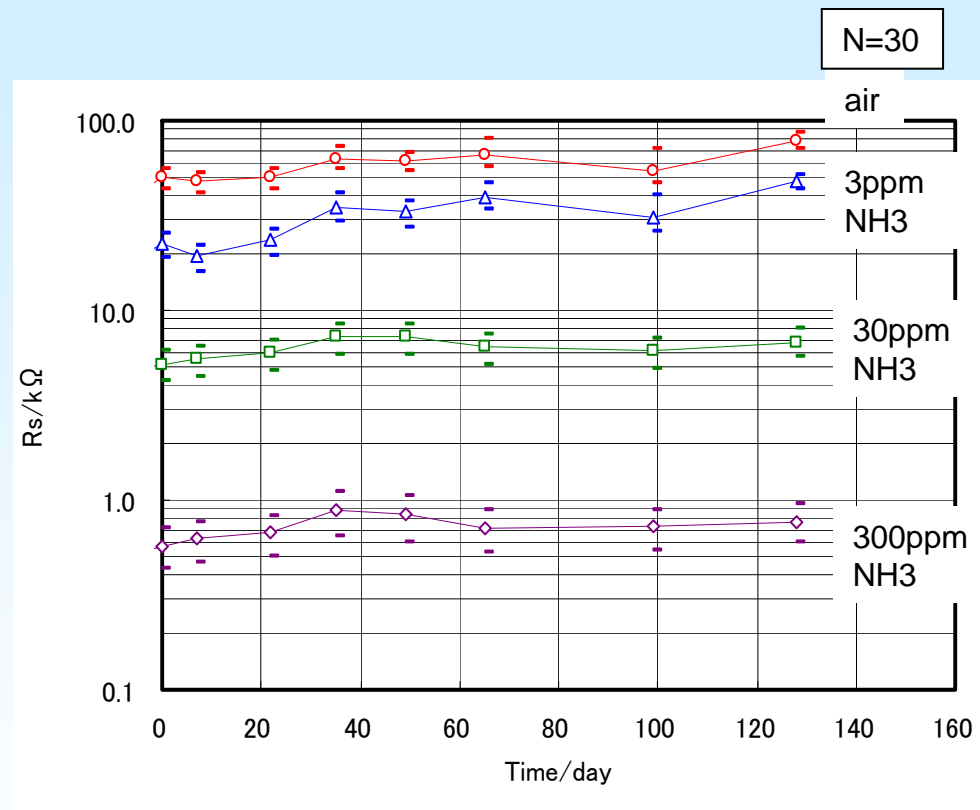


# Humidity Dependency





# Long Term Stability



# Reliability

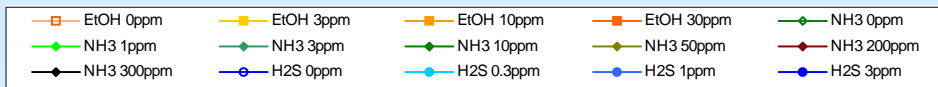
## Test procedure:

- 1) Sensors are powered and measured at 20°C to obtain initial data
- 2) Powered sensors are exposed under test conditions
- 3) For taking measurements during exposure to test conditions, sensors are then returned to the test condition. removed and placed in 20°C for one hour, measured, and
- 4) When not exposed under the test condition, the sensor will be kept powered at 20°C

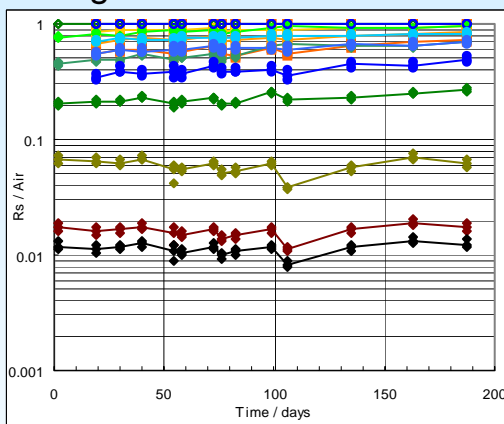
# Reliability

Number=5 pcs. each test

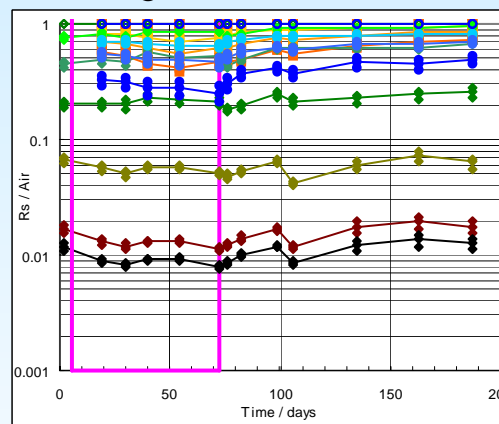
: Under test condition



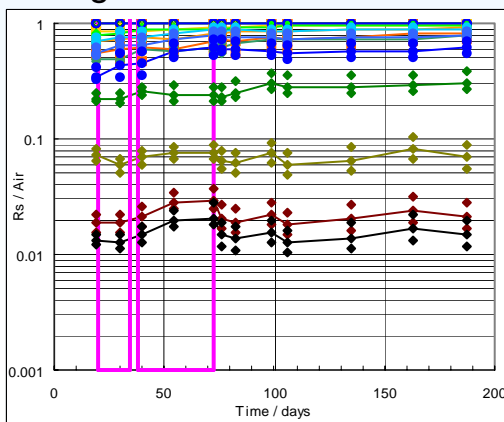
Energized at 20°C



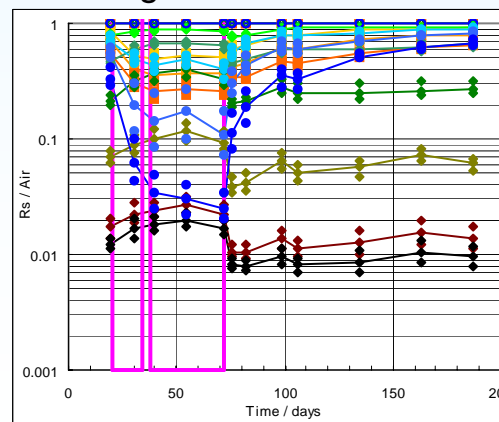
Unenergized at 20°C



Energized at 60°C/95 %RH



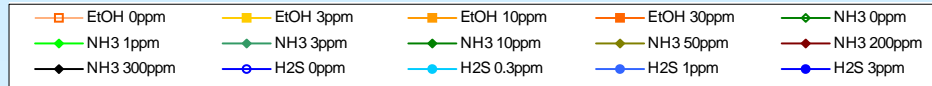
Unenergized at 60°C/95 %RH



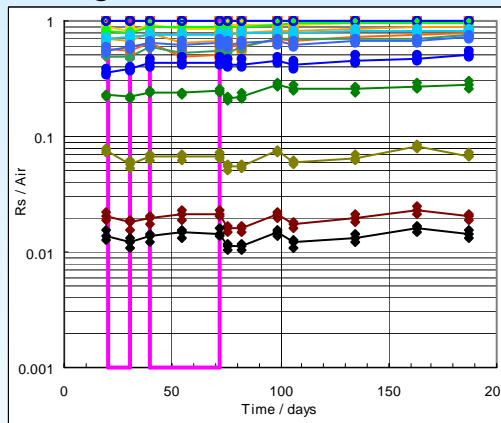
# Reliability

Number=5 pcs. each test

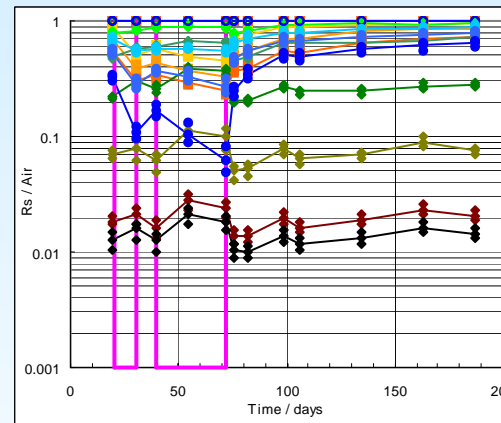
: Under test condition



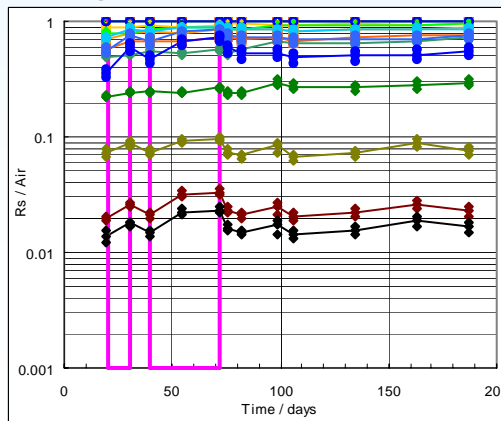
Energized at 40°C/80%RH



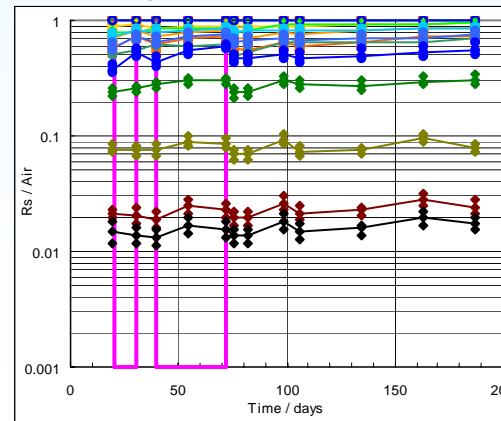
Unenergized at 40°C/80%RH



Energized at 80°C



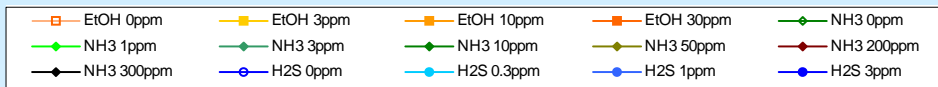
Unenergized at 80°C



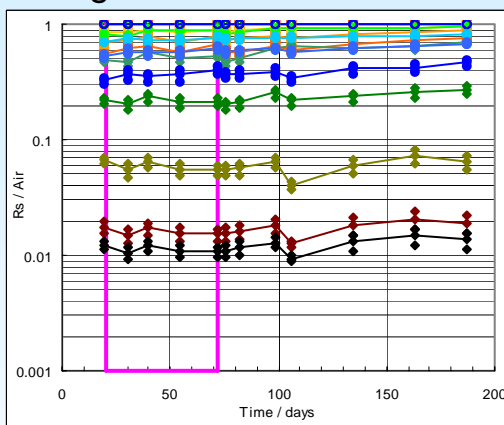
# Reliability

Number=5 pcs. each test

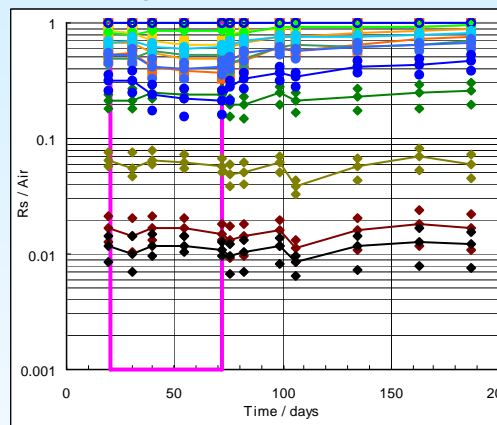
: Under test condition



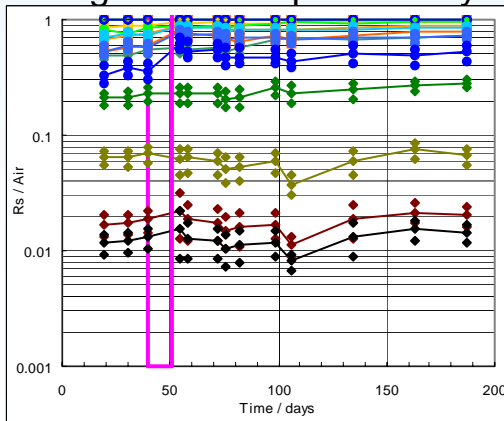
Energized at -20°C



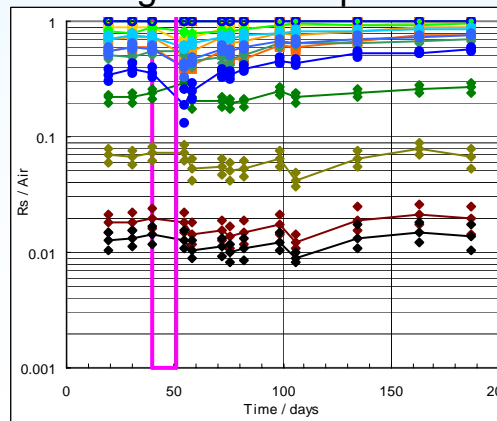
Unenergized at -20°C



Energized at temperature cycle\*



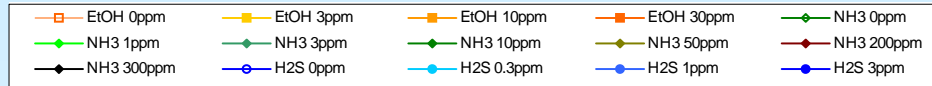
Unenergized at temperature cycle\*



\* (-30°C for 2hr → 20°C/65%RH for 0.5hr → 90°C for 2hr → 20°C/65%RH for 0.5hr → 50°/98%RH for 18hr → 20°C/65%RH for 0.5hr) × 10 cycles

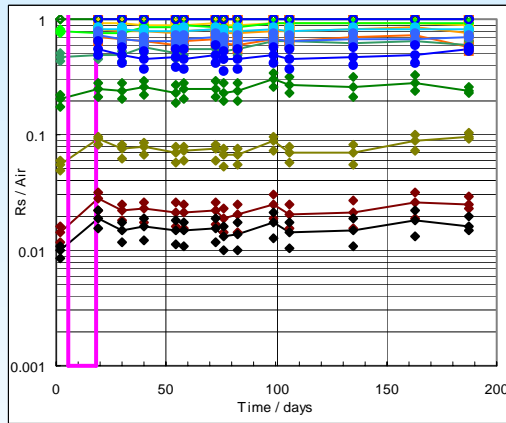
# Reliability

Number=5 pcs. each test

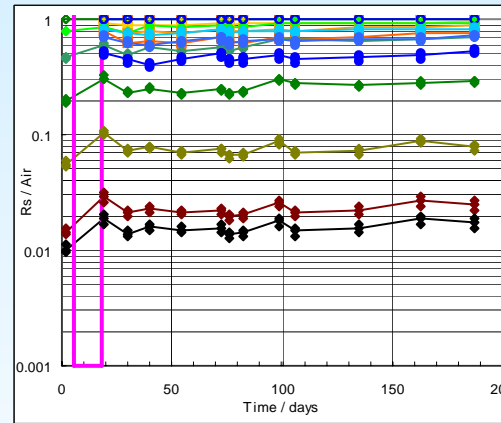


: under test condition

Energized during thermal shock\*



Unenergized during thermal shock\*



\* (-40°C for 0.5hr ⇌ 100°C for 0.5h) × 200 cycles