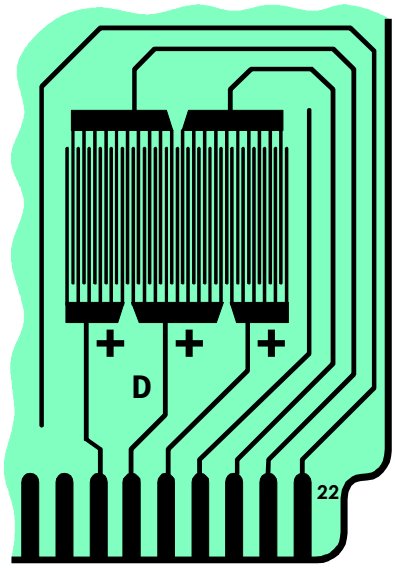
# Insulation Resistance and dc Polarisation in Humid Climate

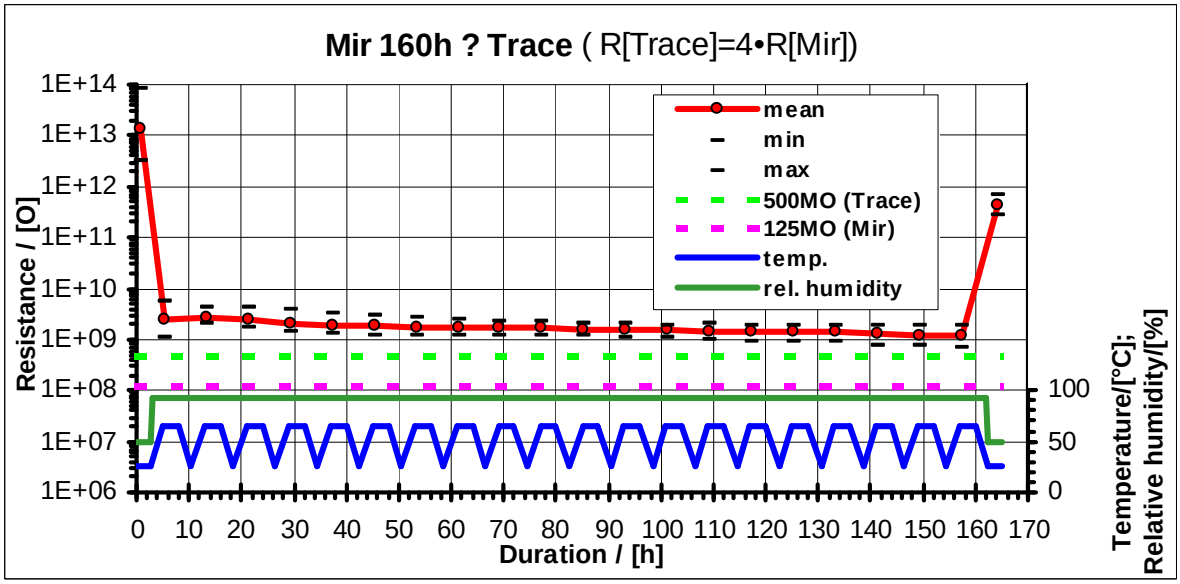



Test pattern of the IPC multi purpose test board (IPC-B-25A)

This test has become very important for printed circuit boards due to failures of electronic equipment caused by damp heat.

Insulation resistance measurements are made before, during and after a cycle with high humidity and elevated temperature. This may be a constant climate or with cyclic changes of temperature while humidity is maintained. Solder masks are tested on a standardised comb pattern. To pass the test, their insulation resistance must not drop below a threshold value. The appearance of coloured spots on copper surface protected by the solder mask is taken into account.

We test according to IEC 60068-2-30, IPC SM 840 and factory standards of our customers.




Insulation resistance diagram for a IPC SM840 test (Trace test) with the following parameters:
First measurement: 25°C,50%rh, $V_{Meas}$=500Vdc; without polarisation
Climate cycles: 25°C to 65°C in 2½h, 3h 65°C measure cycle, 65°C to 25°C in 2½h; 92%rh; $V_{Meas}$=500Vdc; $V_{Polarisation}$=100Vdc
Final measurement: 25°C,50%rh, $V_{Meas}$=500Vdc; without polarisation

The green line shows the threshold insulation resistance, in this case 500MO.