

Analysis of non-defective package devices

Quality survey in various ways

Various observations + dimension measurement

Investigate the quality, condition or shape of solder balls, bonding, etc. in various methods to check if there are any possibility of factors that may develop into problems.

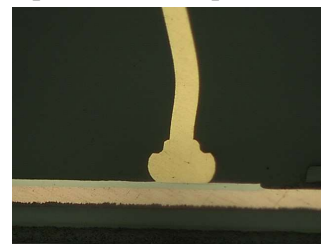
1 SEM-EDX observations

It is possible to observe the sample with high resolution, high magnification, high sensitivity, and high contrast, and by observing the shape of the sample surface, the condition of fine processing and surface can be observed.

Internal defects can also be confirmed by combining with cross-sectional grinding.

Application: Visualization of migration, visualization of element distribution

■ **Example:** Solder joints with an optical microscope



2 X-ray observation

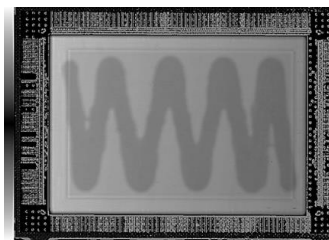
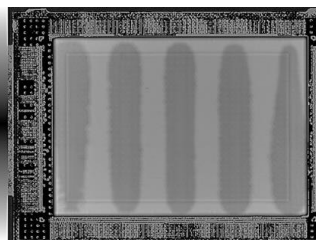
The sample can be observed without decomposition.

Application: Solder bonding, cracks, presence or absence of voids, and shape observation of wires

3 SAT (ultrasonic test)

The wettability of the adhesive under the resin internal voids and chips can be observed with ultrasonic examination.

■ **Example:** Check of wettability of chip adhesive by SAT



4 Digital microscope

Magnify a specific area and check whether the dimensions are as per the specification.

5 DSC

It is also possible to evaluate the thermophysical properties from the thermal change of the sample.

Application: Calculation of cure degree of thermosetting resin, glass transition measurement

We pay close attention to the details of consultations and requests with the first priority on strict adherence. In particular, a confidentiality agreement shall be entered into in the event of a request.