

3. Quality Management

Quality Policy

To become a world class company offering products/services that best satisfy our customers, by establishing Total Quality Management and Quality Comes First corporate culture through the process of continuous improvement.

Built-in Quality

At Winbond, we recognize that every phase of the development and manufacturing process inevitably affects the quality and reliability of the final products, so we concentrate on building quality and reliability into our products from the start. Our commitment to quality is fundamental to our long-term success, so all employees at Winbond participate in quality and reliability assurance activities as part of their basic job responsibilities. Every function and every individual is accountable for a defect-free operation.

Our Commitment to Quality and Reliability

Winbond is committed to manufacturing VLSIs with superior quality and reliability. We maintain high standards and rigid specification control

throughout all the steps in the manufacturing process. Through continuous research and development activities and process improvement, we strive to establish and maintain increasingly higher standards of quality and reliability.

Quality Certificate

To verify that its committed to maintain world-class quality standards is realized in practice, Winbond has obtained certification from the world's leading quality control promotion organizations. In 1993, we were proud to be certified as an approved manufacturer under both the IECQ and ISO 9002 systems, and in 1994 we were certified under the ISO 9001 system.

Quality Management Program

The purpose of Quality Management Program at Winbond is to establish the controls needed to assure that the quality and reliability of our VLSI products fully satisfy our customers. We strive to deliver competitive products free from defects and to provide our customers with prompt, professional service. Our Quality Management

Program focuses on three major areas: quality control, reliability assurance, and failure analysis. Figure 3.1 shows the Winbond quality assurance system flow chart.

Quality Control

Winbond has implemented a series of quality control functions that cover all the steps in manufacturing process. The main steps in this quality control procedure are:

- Incoming materials inspection
- Wafer processing
- Electrical characteristics testing
- Chip assembly

Constant monitoring on all steps in the manufacturing process and information feedback at all levels allow fast and efficient detection of problems, evaluation and analysis, and corrective measures. We emphasize that each step in the manufacturing process should be undertaken with a "Do it right at the first time" attitude and must produce a defect-free output. The over-all result is a line of high-quality, reliable products.

Reliability Assurance

At Winbond, the aim of reliability assurance testing is to assure high-level product performance throughout the intended life of the products. Each manufacturing phase is subject to continuous review, analysis, and evaluation, with modifications introduced to further improve quality and reliability. Our reliability system is based on three important sources of reliability data:

- Release qualification tests
- Real time monitor and conformity tests
- Field failure information

Failure Analysis

Failure analysis, which determines the cause of product failures and proposes corrective action, is an important part of reliability assurance. At Winbond, scanning electron microscopes, diagnostic probe stations, optical microscopes, and many other precision instruments are used to perform failure analysis on devices submitted from various sources. Defective ICs are logged into the laboratory for inspection and for preparation of corrective action reports.

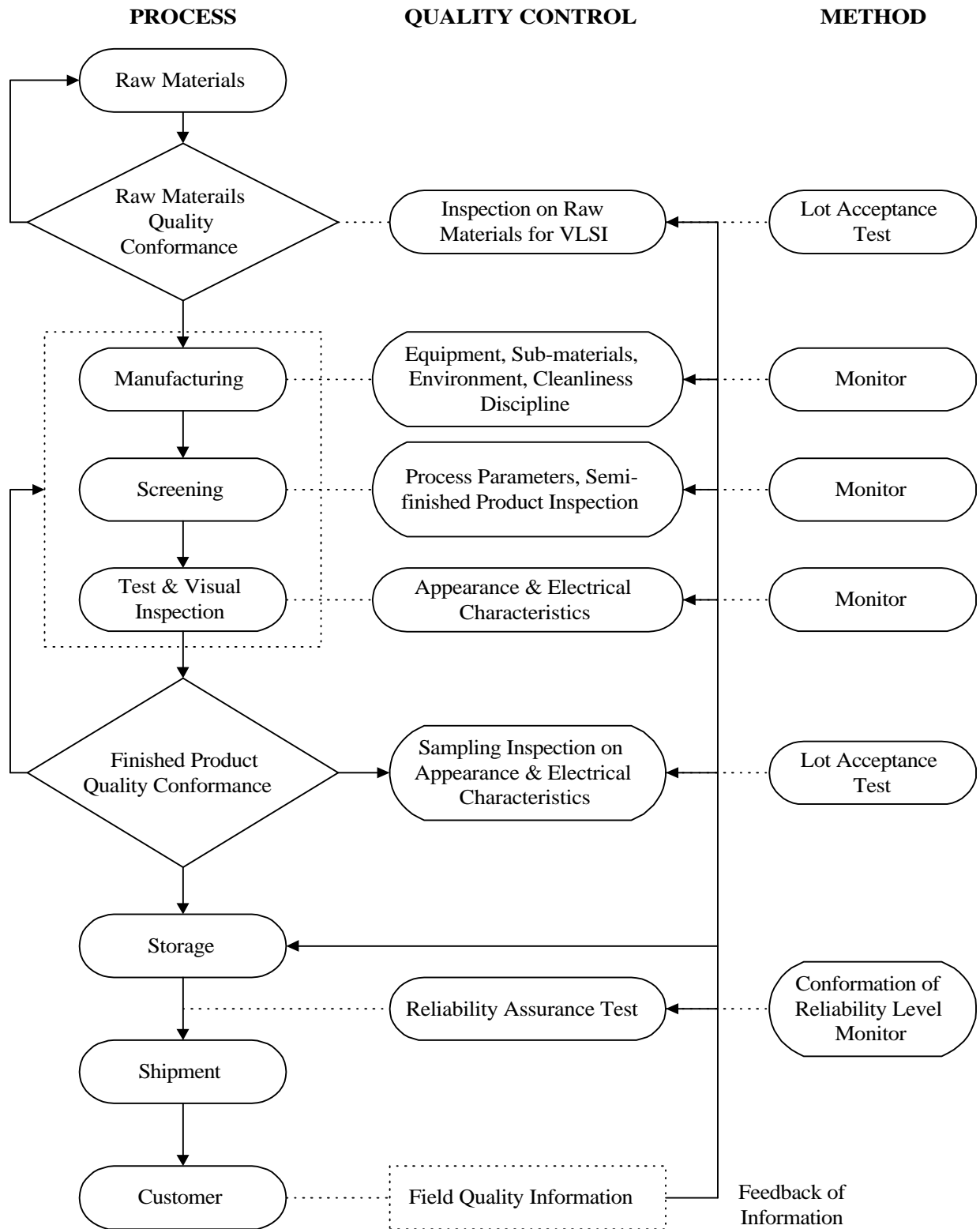


Figure 3.1 Winbond Quality Assurance System Flow Chart