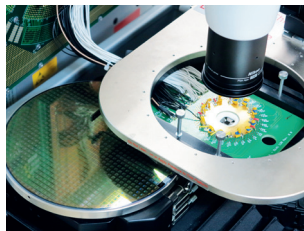


High Performance Center for electronic components



Since 1986, HTV, with more than 220 highly qualified employees, is one of the world's largest providers of services related to electronic components.

■ Test services

- Testing of electrical and optical parameters according data sheet (including wafer testing)
- Environmental simulation & qualification
- Mechanical testing, e. g. Pull- & Sheartest
- Individual test program development, e.g. for ASICs
- Fault analyses
- MTBF calculation for determination of the reliability of assemblies, devices and systems
- Test capacity: several hundred thousand parts/day

Worldwide unique!

■ Long-Term Conservation and Storage

- **TAB®-method** (Thermal-Absorptive Gas-Barrier) for the conservation and storage of electronic components (components, assemblies, wafers, complete devices) of currently **up to 50 years**
- Long-Term Storage and Conservation of important documents with **HTV-PermaDoc®**
- Costless storage and purchase of clients' excess stocks with **HTV-EverStock®**

■ Component processing

- Drying of components
- HTV-PLUS-Vacuum-Drying
- Marking/Removing of original marking
- 3D lead inspection
- Tape & reel service
- Mechanical preparation, e. g. straightening of pins
- Rework of electronic assemblies/Refurbishing

- **HTV-revivec®:** for cleaning and reconditioning

Worldwide unique!

■ Component programming

- Programming of all components
- Programming even of huge NAND flashes
- Wafer programming
- Self-developed adapters and algorithms
- Programming capacity: >750.000 pcs/day
- **HTV-OTP-Alive:** Erasing and reprogramming of OTP components

Worldwide unique!

■ Institute for material analyses

- Comprehensive analytical services
- In-process quality control
- Examination of errors in processes, circuit boards defects and component failures
- Determination with regards to component manipulation
- Evaluation of bare printed circuit boards and assemblies according to IPC-A-600/610
- Quality control of welding seams

Methods:

- Light microscopy
- Microsectioning and ion beam etching
- Metallographic examinations/**HTV-MetaFinePrep®**
- 2D/3D-X-ray tomography (CT)
- Scanning Electron Microscopy (SEM)
- Energy Dispersive X-ray Spectroscopy (EDS/EDX)
- Analysis of layer thicknesses and material via XRF
- FTIR-spectroscopy for analysis of organic substances
- Fully automated solderability tests
- Chemical component decapsulation
- Nanoindentation for determination of the hardness

■ Further creative services

- **HTV-research projects**
- **HTV-Academy**
- **HTV-Center of creativity** for the development of new business ideas
- **HTV-Life®**-mark of excellence against planned obsolescence



ISO 9001
BUREAU VERITAS
Certification



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