

Module Design, Manufacture and Test

Reliability

Long-term system reliability is our major focus for our customers systems. Reliability is achieved by insuring that the device is designed, manufactured and tested accurately leading to reduced defective (short term and long term) devices being shipped to the field. Failures in the field reduces customer satisfaction and increases the total cost of ownership. Our goal at WEDC is to increase the profit and success for our customers.

RoHS Compliant Modules

White Electronic Designs Corporation (WEDC) is committed to environmental care in all its facilities. We are committed to complying with all environmental laws and regulations applicable to our activities and to our products. WEDC maintains detailed Lead-Free / RoHS information to enable our customers to cross reference and find valid alternatives.

Module Characterization

Complete correlation with customers test results on DIMM devices can be established. Test correlation has been verified in many cases to the exact memory cell of failure on the individual module DRAM components. Other memory module suppliers in many cases have not been able to fail these same devices using their internal test algorithms and procedures.

Based on customer's needs, WEDC provides modules validated by Intel, AMD, Tyan, etc.

Module Validation

WEDC modules are validated on multiple platforms with full parametric characterization. Our lab capabilities include documentation for IBIS models extracted from a schematic or physical layout.

Failure Analysis

WEDC has extensive experience in performing failure analysis on a wide range of parts and products and identifying a wide range of failure mechanisms.

Extended Temperature Testing

WEDC has extensive experience and capability in extended temperature testing. WEDC can provide guard-banded extremes of temperature and voltage as well as temp-cycle simulations.

Customized Test Patterns

Typical WEDC test flow includes:

- ◆ Four-corner production test
- ◆ Min-max voltage and temp (0-70°C); guard band test temps to $\pm 10^{\circ}\text{C}$
- ◆ Contact and Leakage
- ◆ Operating Current
- ◆ Walk Shift Patterns
- ◆ March G
- ◆ Walk increment
- ◆ March X, Y, C
- ◆ Stress test
- ◆ SPD

Configuration, Source, Lot & Revision Control

Upon request WEDC can provide component revision tracking/control; configuration control; or module design revision tracking/control.

Part numbering system incorporates silicon supplier source control.

Available serialization and lot traceability.

Product Change Notification (PCN)

PCN's are provided for any data book electrical specification changes (fit, form and function).

Design Capabilities

WEDC module products are designed with controlled impedance differential pairs; low inductance designs and high speed techniques.

Pre and post layout electrical simulation for crosstalk, timing and signal integrity are performed on every design; simulation to minimize overshoot and undershoot is incorporated in each module.

Spice, ELDO and IBIS modeling.

Burn-in

Available upon request. Broad background in burn-in for military grade memories and defense-aerospace level components.

Custom Labeling

Where OEM customer differentiation is critical, WEDC offers customization such as private labeling to reduce the burden on your engineering and manufacturing resources. Customer part number, bar code, serialization for traceability and other customization is available upon request (corporate logo etc.)

Manufacturing Excellence

WEDC modules are manufactured to be reliable in the end application. Factors such as power dissipation, mechanical stress, ambient temperature and humidity, shock, vibration, and handling can be -----
----- . The WEDC design team expertly evaluates the application and, using advanced modeling and prototype testing, such as module validation, temperature cycle simulation, module characterization and 2nd level testing, ensure that the product will meet the customer's reliability needs.

Tight process controls result in less than 40 DPMO (defects per million opportunities) at first pass (industry standard is >250). WEDC modules are 100% built in the U.S. using the Six Sigma approach to process monitoring; ISO 9000 quality management system

For information on products and services contact our Electronic Systems Division:

Electronic Systems Division
3601 E University Dr.
Phoenix, AZ 85034
Tel: 602-484-0084
Fax: 602-484-0744



WHITE ELECTRONIC DESIGNS
ELECTRONIC SYSTEMS DIVISION