

Principals

Thomas Allsup, Mechanical Engineer

Thomas is Anida Technologies' chief mechanical designer. He has over seventeen years experience in various design engineering and engineering management roles in the semiconductor and related industries (including the design and manufacture of semiconductor burn-in test sockets). Thomas has a BSME from Oklahoma State University and a MSME from University of Texas at Arlington. He is currently completing work on an Engineering PhD from Kennedy Western University. Thomas has one patent and one pending.

Ray Blasingame, Electrical Engineer

Ray leads the electrical engineering activities at Anida Technologies. After serving in the Air Force and earning his BSEE from Oklahoma State University, Ray has over thirty years experience with electronics manufacturers such as Texas Instruments and Honeywell. Ray has three patents and six pending.

Garry Stevens, Process Engineer

Garry leads all process engineering and related activities for the company. After serving in the Marines, he has eighteen years experience in the semiconductor industry working in a diverse set of process engineering capacities at semiconductor manufacturers such as Honeywell and TRW. Garry has completed his Associates Degree and is currently working on his BSCS degree.

In addition to qualification services, Anida Technologies also provides:

*Electro-Mechanical Design
Engineering for Semiconductor Back-
end and Sensor Industries*

Software and Firmware Development

*Prototype and Production Contract
Manufacturing*



**Burn-In Socket
Qualification
Services**

Providing Turnkey Solutions



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Burn-in Socket Qualification

Anida Technologies offers a complete line of burn-in socket qualification and reliability study services. Anida Technologies can provide total comparison studies for similar sockets from multiple vendors or simply measure one or two parameters on a single socket. All services listed are provided turnkey to the customer and are performed in house unless otherwise stated.

General Socket Qualification Services

- Provide independent engineering analysis report for socket.
- Measure and photograph external dimensions to socket specification.
- Provide contact "map" using external vision system.
- Perform laminar and turbulent wind tunnel experiments to determine thermal performance.
- Perform high temperature soaks with continuous temperature and continuity
- Perform cycle testing with continuity monitoring.
- Provide SEM photography of devices or socket features using external SEM lab.
- Measure sample or total contact resistance.
- Measure sample contact inductance using external lab.
- Measure sample contact plating thickness and makeup using external lab.

Socket Specific Qualification Services

Ball Grid Array

- Measure sample or all contact open position to determine maximum ball size (all positions may require using external vision system).
- Measure sample or all contact closed position to determine minimum ball size (all positions may require using external vision system).
- Measure sample of contact tips and surrounding socket body for coplanarity.
- Measure sample contact forces into ball.
- Perform witness marking tests on sample of balls which may include SEM photography.

Pin Grid Array/ Leaded Packages

- Measure sample or all leads location and size on device or socket (all positions system).
- Measure sample or all contact open position to determine maximum lead size (all positions may require using external vision system).
- Measure sample or all contact closed position to determine minimum lead size (all positions may require using external vision system).
- Measure sample extraction force.

Socket Specific Qualification Services *(continued)*

Land Grid Array

(including Quad Flat No Lead)

- Measure device pocket size at working plane.
- Measure sample or all contact slots widths and lengths.
- Measure sample of contact widths.
- Measure sample of contact tips and surrounding socket body for coplanarity.
- Measure sample contact forces to working plane.
- If heat slug or sink is present then measure coplanarity with contacts
- Perform witness marking tests using dyed surfaces which may include SEM photography.
- Measure activation force of socket.
- Measure and characterize force distribution on device.
- Statistical evaluation of contact repeatability using internally created software.

Heat Sink / Slug Evaluation

- Perform laminar and turbulent wind tunnel performance.
- Evaluate alternative heat sink designs and thermal interfaces.

Custom Requirements

If you do not see the evaluation, qualification or reliability test required by your specification, please contact Anida Technologies for further assistance.