



INSPECTION • ANALYSIS • TESTING

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Attn: Mechanical/Environmental Group  
SUBMIT FORM: Mech-Enviro@orslabs.com

## Mechanical and Environmental Testing Submission Form

Client: \_\_\_\_\_ Date: \_\_\_\_\_  
 Company: \_\_\_\_\_ P.O. No.: \_\_\_\_\_  
 Address: \_\_\_\_\_ Rel No.: \_\_\_\_\_  
 \_\_\_\_\_ Telephone: \_\_\_\_\_  
 E-mail: \_\_\_\_\_ Billing Email: \_\_\_\_\_  
 ORS Quote No: \_\_\_\_\_

Package Description: \_\_\_\_\_ # Of Samples: \_\_\_\_\_

Do samples require ESD precautions during analysis?  
 Will samples be used for Flight production (Lot Screening)

Test Standard: \_\_\_\_\_ Condition: \_\_\_\_\_  
 Approximate Dimensions: W: \_\_\_\_\_ H: \_\_\_\_\_ L: \_\_\_\_\_  
 Approximate Weight: \_\_\_\_\_ Bias Required: Yes No  
 Custom Packages May Require Drawings  
 ESD Class \_\_\_\_\_

### METHODS OF ANALYSIS

#### Environmental Testing

\* DLA Testing

Accelerated Bias Aging	Steam Aging	Temperature Humidity Bias/Non Bias
Autoclave Testing	Temperature Cycling Testing*	Powered Temperature Cycle
Cyclic Moisture Resistance*	Temperature Humidity Testing	High Temperature Operating Life
Highly Accelerated Stress Test (HAST)	Temperature Storage Testing	Powered Temperature Storage
Moisture Sensitivity Level Testing	Thermal Shock Testing*	High Temperature Reverse Bias
(MSL) Preconditioning Test	Stabilization Bake*	High Temperature Gate Bias
Salt Atmosphere Testing*	Damp Heat	Intermittent Operating Life

#### Mechanical and Electrical Testing

Solderability Testing* SnPb Pb Free	
Test Condition: _____	Semiconductor Parametric Testing
Fiber Integrity Testing	Constant Acceleration Testing*
Mechanical Shock Testing*	Transportation Testing
Particle Impact Noise Detection (PIND)	Variable Frequency Vibration Testing*
Random Vibration Testing*	Resistance to Solder Heat*
Resistance to Solvents Testing*	External Visual
Electrical Testing	Surface Roughness

#### Analytical Testing

X-Ray	SEM/EDS	Hermeticity
Acoustic Microscopy	Physical Dimensions	

#### Return Shipment

UPS: Red Blue Ground  
 Fed Ex: Pr. 1 Std. Econ.  
 Acct. #: \_\_\_\_\_

#### Additional Instructions or Restrictions

## DESCRIPTION OF TEST METHODS

### ORS APPROVED DLA LAND AND MARITIME SUITABLE TEST METHODS

Mil-Std 883 Test	Method	Condition
Moisture Resistance	1004	
Stabilization Bake	1008	A, B, C and D
Salt Atmosphere	1009	A, B, C and D
Temperature Cycling	1010	A, B, C, D and F
Thermal Shock	1011	A, B and C
Constant Acceleration	2001	A, B, C, D, E and F
Mechanical Shock	2002	A and B
Solderability	2003	A and B
Vibration, Variable Frequency	2007	A
Resistance to Solvents	2015	
Random Vibration	2026	I – II
Resistance to Solder Heat	2036	A, B, I, J, and K

JEDEC Test Standards	Method	Condition
Biased Highly Accelerated Stress Test	JESD22-A110	A and B
Unbiased Highly Accelerated Stress Test	JESD22-A118	A and B

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These test procedures are used exclusively for testing of devices in accordance with current versions of Mil-Std 883 per the conditions of "Suitability" status granted by DLA Land and Maritime. No variations are permitted to the procedure nor to the device test conditions. Furthermore, all tests performed are subject to inclusion in ORS' annual retention report submitted to DLA Land and Maritime. All records regarding these tests are subject to audit and inspection by the U.S. Government.

### SOME IMPORTANT REMINDERS

Please provide a valid Purchase Order and, if requested by your company, a Release Number.

Please be sure to specify "Additional Instructions or Restrictions" that should be followed during sample handling, testing or shipment.

Unless otherwise requested, test reports will be sent electronically and samples will be returned via UPS Ground.

Please refer to the ORS terms and conditions of Quotation and Sale at [www.orslabs.com/terms-conditions-sale](http://www.orslabs.com/terms-conditions-sale).

All shipping and handling fees associated with the transportation of samples to and from our testing facility, as well as special courier fees for expediting test reports, are the responsibility of the client.

Devices subjected to Radioisotope Hermetic Seal testing may be retained by ORS until suitable background levels are achieved before devices may be returned to the client.

All shipping and handling fees associated with the transportation of samples to and from our testing facility, as well as special courier fees for expediting test reports, are the responsibility of the client.

On-site visits are encouraged and we welcome your personal involvement during sample analysis.

Please contact our Sales department for pricing information.

For technical information, please contact the Mechanical or Environmental Test Group at (855) ORS-LABS.