



INSPECTION • ANALYSIS • TESTING

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### Component Analysis Submission Form

Client: _____	Date: _____
Company: _____	P.O. No.: _____
Address: _____	Rel No.: _____
_____	Tel: _____
E-mail: _____	Fax: _____

Package Type(s): _____	# of Samples: _____	Flight Hardware? <input type="checkbox"/> YES <input type="checkbox"/> NO	Do samples require ESD precautions during analysis? <input type="checkbox"/> YES <input type="checkbox"/> NO
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### ANALYSIS REQUESTED

(Discussion of analysis is recommended prior to quotation and submission)

<input type="checkbox"/> Destructive Physical Analysis (DPA) per Mil-Std or Customer Specification	Mil-Std: _____	<input type="checkbox"/> Failure Analysis <i>(Consultation required prior to analysis.)</i>	<input type="checkbox"/> Construction Analysis
Test Method: _____		<input type="checkbox"/> Surface/Material Analysis	<input type="checkbox"/> Other
Client SOW: _____			

### METHODS OF ANALYSIS

<input type="checkbox"/> Internal Vapor Analysis (IVA®)*	<input type="checkbox"/> Solderability
<input type="checkbox"/> Optical Microscopy	<input type="checkbox"/> Particle Impact Noise Detection (PIND)*
<input type="checkbox"/> Fluorescence Microscopy	<input type="checkbox"/> SEM Metallization Inspection*
<input type="checkbox"/> Scanning Acoustic Microscopy (SAM)	<input type="checkbox"/> Bond Pull*
<input type="checkbox"/> Field Emission SEM (FeSEM)	<input type="checkbox"/> Die Shear*
<input type="checkbox"/> Scanning Electron Microscopy (SEM)	<input type="checkbox"/> Plasma/Chemical I.C. Deprocessing
<input type="checkbox"/> Energy Dispersive X-ray Spectroscopy (EDS)	<input type="checkbox"/> Chemical/Mechanical Decapsulation
<input type="checkbox"/> Micro Fourier Infrared Spectroscopy (FT-IR)	<input type="checkbox"/> Bond Strength/Ball Shear/Die Shear
<input type="checkbox"/> GC/MS	<input type="checkbox"/> Cross-Sectional Analysis
<input type="checkbox"/> X-Ray Fluorescence (XRF)	<input type="checkbox"/> Ion Milling
<input type="checkbox"/> Radiography*: <input type="checkbox"/> Film <input type="checkbox"/> Real Time	<input type="checkbox"/> Damp Heat Storage
<input type="checkbox"/> Radioisotope Leak Testing (Kr-85)*	<input type="checkbox"/> High/Low Temperature Storage
<input type="checkbox"/> Helium Fine/Perfluorocarbon Gross Leak	<input type="checkbox"/> Thermal Cycling
<input type="checkbox"/> Leak Site Identification	<input type="checkbox"/> Consulting Services
<input type="checkbox"/> Dye Impregnation/Penetrant	<input type="checkbox"/> Other:

\*Analysis performed to DLA test methods must be included in the ORS retention log to DLA Land and Maritime as part of the Laboratory Suitability program.

Request phone consultation upon receipt.

### REPORT FORMAT

Electronic Report (.pdf file format)
  Original Hard Copy Report
  Images Only  
 USB Flash Drive
  E-mail
  CD-ROM

#### Return Shipment

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

#### Additional Instructions or Restrictions

\_\_\_\_\_

# DESCRIPTION OF TEST METHODS

## ORS APPROVED DLA LAND AND MARITIME SUITABLE TEST METHODS

Mil-Std 883 Test	Method	Condition
Seal	1014	A1, A2, A5, B1, B2, B1/B2 and B3
External Visual	2009	N/A
Internal Visual (Monolithic)	2010	A, B
Radiography	2012	Non-Film (Digital) and Film
Physical Dimensions	2016	N/A
Internal Visual (Hybrid)	2017	H and K
SEM	2018	N/A
PIND	2020	A, B
Internal Gas Analysis	1018	N/A
Bond Strength	2011	Condition D
Die Shear	2019	N/A
Internal Visual (Passive)	2032	H and K

Mil-Std 750 Test	Method	Condition	
Internal Gas Analysis	1018	N/A	
Seal	1071	A, B, G1, G2, H1, H2, H3	
Die Attach Integrity	2017	Condition A	
Bond Strength (Destructive Bond Pull)	2037	Condition D	
Physical dimensions	2066		
PRE-CAP visual, power MOSFET'S	2069		
Visual and mechanical examination	2071		
Internal Visual transistor (PRE-CAP) inspection	2072		
Visual inspection for die (semiconductor diode)	2073		
DECAP Internal Visual Design Verification	2075		
Radiography	2076		Non-Film (Digital) and Film
SEM	2077		N/A
PIND	2052		A, B
Destructive Physical Analysis for wire bonded devices	2102		

These test procedures are used exclusively for testing of devices in accordance with current versions of Mil-Std 883 and Mil-Std 750 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 and samples will be returned via UPS Ground.
- 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 further technical information, please contact the Component Testing Group at (315) 736-5480.