



INSPECTION • ANALYSIS • TESTING

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Attn: Component Testing Group
E-mail: component@orslabs.com

Component Analysis Submission Form

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

Package Type(s): _____ # of Samples: _____
Flight Hardware? [] YES [] NO
Do samples require ESD precautions during analysis? [] YES [] NO

ANALYSIS REQUESTED

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

[] Destructive Physical Analysis (DPA) per Mil-Std or Customer Specification
Mil-Std: _____ Test Method: _____ Client SOW: _____
[] Failure Analysis (Consultation required prior to analysis.)
[] Construction Analysis
[] Surface/Material Analysis
[] Other

METHODS OF ANALYSIS

- [] Internal Vapor Analysis (IVA®, HR-IVA®)*
[] Radioisotope Leak Testing (Kr-85)*
[] Helium Fine/Perfluorocarbon Gross Leak
[] Combined HE/O2 Dry Gross and Fine Leak (HSHLD®)*
[] Optical Microscopy
[] Fluorescence Microscopy
[] Scanning Acoustic Microscopy (SAM)
[] Field Emission SEM (FeSEM)
[] Scanning Electron Microscopy (SEM)
[] Energy Dispersive X-ray Spectroscopy (EDS)
[] Micro Fourier Infrared Spectroscopy (FT-IR)
[] GC/MS
[] X-Ray Fluorescence (XRF)
[] Real Time X-ray Radiography*
[] Leak Site Identification
[] Dye Impregnation/Penetrant
[] Solderability
[] Particle Impact Noise Detection (PIND)*
[] SEM Metallization Inspection*
[] Bond Pull*
[] Die Shear*
[] Plasma/Chemical I.C. Deprocessing
[] Chemical/Mechanical Decapsulation
[] Cross-Sectional Analysis
[] Ion Milling
[] Damp Heat Storage
[] High/Low Temperature Storage
[] Thermal Cycling
[] Consulting Services
[] 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

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) |
| 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) |
| 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.
- Please refer to the ORS terms and conditions of Quotation and Sale at 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.
- 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 Component Testing Group at (855) ORS-LABS.