**Requisition for IST Testing**

(Please send this completed form with the coupons)

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| **Service Provided by: PWB Interconnect Solutions Inc.** **103-235 Menten Place** **Ottawa, Ontario K2H 9C1** **Canada**  | **Date:** |
| **Service Requested by:** **Email:** **Telephone:**  | **Purchase Order Number:**  |
| **1. Work Order Number:**  | **2. Lot number:**  |
| **3. Part Number:** | **4. Date Code:**  |
| **5. Coupon Design:**  |
| **6. Number of coupons: a) Shipped= b) To be tested= c) Spare=**  **Please include a priority list for large quantities** |
| **7. Pre-Bake, Number of hours and temperature:**  |
| **8. Capacitance measurements: Yes □ No □**  |
|  |
| **9. Specification/ Protocol to be used: Rev: Date of Rev:** |
| **If the Specification / Protocol is not available or unknown, please complete 10, 11, 12 and 13 below** |
| **10. Dual Sense□ Single testing□: Circuits to be tested: H□ P1□ P2□ S1□ S2□ S3□ HOFP□** |
| **11. Preconditioning- Number of cycles and temperature:** **Circuits for Preconditioning IST testing P = \_\_\_\_ Sa = \_\_\_\_\_\_ Sb = \_\_\_\_\_\_** |
| **12. IST Testing- Number of cycles and temperature:** **Circuits for IST testing P = \_\_\_\_ Sa = \_\_\_\_\_\_ Sb = \_\_\_\_\_\_** |
| **13. Failure Threshold- Percent change:**  |
|  |
| **14. Return Coupons: Yes / No Courier + Account #:** **SHIP TO ADDRESS:**  |
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| **15. Failure Location Required: Yes / No**  |
| **16. Failure Analysis Required: Yes □ No □ 16. Microsections: Yes □ No □ Quantity =** |
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| **Special Instructions** |
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| **Shipping Instructions: via your preferred courier, paid by sender, tightly wrapped so coupons are not damaged in transit. Please identify GLOVER CUSTOMS BROKER INC. as the responsible Canadian customs broker to clear all incoming shipments. Commercial Invoice should read: Description = # coupons, for destructive testing, NO commercial/resale value, UNIT VALUE = $US 0.50 / coupon.**  |
| **PWB IST Contact Information** |
| **Wendy Boswell: Service Coordinator****613-596-4244 ext.225****Wendy.Boswell@pwbcorp.com**  | **Joanne Havis: Service Coordinator****613-596-4244** **Joanne.Havis@pwbcorp.com** |
| **Joe McLean: Service Coordinator****613-596-4244 ext. 227****Joe.McLean@pwbcorp.com** | **Lisa Timtschenko: Office Administrator (Quotes)****613-596-4244 ext.244****lisa@pwbcorp.com**  |

**Brief Line Item Explanations**

**1., 2., 3., 4.:** These fields are provided for the Customer’s traceability; the part-number, work-order number, lot number and date code will appear in the report exactly as written on the requisition form by the Customer.

**5. Coupon Design:**  In this field place the name of the IST coupon design, example: SL12014A. The prefix of the coupon indicates the main via feature in the coupon, some examples are: SL= Sequentially laminated, TV= Through via, MV= Microvia, CB = Counter bore, GT = Generic through-via.

**6. Number of coupons:** “Shipped” quantity should be equal to “to be tested” plus “Spare”

**7. Pre-Bake, Number of hours and temperature**: A prebake is used to remove any moisture from the coupons which may have been absorbed during transit. If the coupons are not to be pre-baked then they should be shipped vacuum sealed with desiccant.

**8. Capacitance measurements:** Capacitance measurements can indicate whether material degradation has occurred.Note: Not all coupon designs have capacitance capabilities.

**9. Specification/ Protocol to be referenced:** When the coupons are required to be tested to a known IST test protocol, the “spec number”, “revision” and “date” is filled in. For example, “ECSS-Q-ST-70-60C”, “DIR 1” “30 June 2017”. Typically, the OEM defines a protocol that the PCBs must meet. Where the protocol / specification is not known, Lines 10, 11 and 12 must be completed in order for PWB to know the test conditions.

**10. Dual Sense**/**Single Sense testing/Circuits to be tested:** This will depend on the coupon design and any testing protocol/standard referenced. Where the protocol / specification is not known, the circuits to be tested must be filled.

**11. Preconditioning- Number of cycles and temperature:** Usually 230°C for tin lead and 245°C to 260°C for lead free. The number of cycles should represent the number of assembly reflows plus expected reworks. Where the protocol / specification is not known, the preconditioning, number of cycles and temperature must be completed in order for PWB to know the preconditioning test conditions

**12. IST Testing- Number of cycles and temperature** Where the protocol / specification is not known, the number of cycles and temperature must be filled out in order for PWB to know the test conditions

**13. Failure Threshold - Percent change:** The failure threshold for any circuit is determined by the percent change in the bulk resistance. IPC Standard IPC-TM-650 2.6.26A, Test method A, Table 5-1 suggest a 10% change in the bulk resistance as the failure threshold. Also, commonly used is 5% and 4%. Only one threshold can be entered per test run.

**14. Return Coupons:** If you do not require the tested/spare couponsshipped back to you indicate “No” and PWBIS will hold them for a brief period of time and then destroy and dispose of them. **Courier + Account #, SHIP TO ADDRESS,** these two fields are required if the coupons are to be returned.

**15. Failure Location Required**: A “yes” indicates that PWBIS will use a thermal infrared camera to locate and identify with a red arrow, the failure site on all failed coupons.

**16. Failure Analysis Required:** Failure analysis is performed utilizing images from microsections, prescreening data, preconditioning and IST data collected during testing and any other source relevant to the analysis. The analysis will be provided in a report along with the microsection images.

**17. Microsections:** In this field list the number of microsections that will be covered under the purchase order. The microsection images can be provided in a failure analysis report or the microsections can be created and then shipped to you.