

# MAGNALYTIX<sup>®</sup>

## MGX QMP Type B Mixed Technology SIR Test Board



### Practical Uses

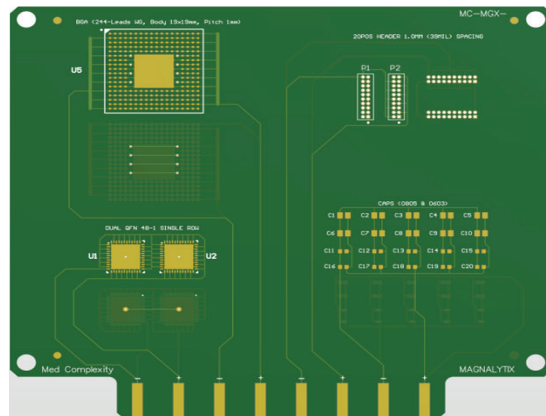
#### IPC J-STD-001H ~ Section 8: Cleanliness

The electronics industry is rapidly embracing the IPC J-STD-001 cleanliness standard. SIR testing is the preferred method for qualified manufacturing plan certification. This standard has just begun to impact electronics manufacturers as design and production teams work through compliance with their design authority.

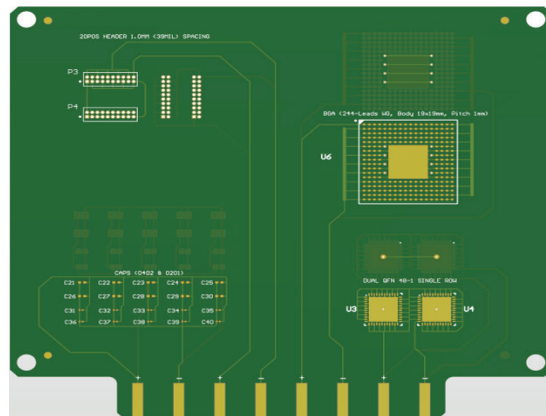
A Qualified Manufacturing Plan requires the CM to qualify (N1D2D3) the soldering and/or the cleaning process that results in acceptable flux levels and other residues. Objective evidence shall (N1D2D3) be available for review.

Using the historical 1.56 µg/NaCl equivalence / cm<sup>2</sup> value for ROSE, with no other supporting objective evidence, is not considered an acceptable basis for qualifying a manufacturing process.

COMPONENT SPECS FOR THE TOP SIDE		
<b>Quadrant 1</b>	2 - Components	QFN48 - 48 Leads - 7x7mm body, Pitch 0.5mm
<b>Quadrant 2</b>	1 - Components	FBGA 244 with a thermal lug-19x19mm body, Pitch 1.0mm
<b>Quadrant 3</b>	4 - Components	Pin Headers - 20 Leads - Pitch 1.0mm
<b>Quadrant 4</b>	16 - Components	Chip Caps - 8 each of 0805 and 8 each of 0603 - 10 pF



COMPONENT SPECS FOR THE BOTTOM SIDE		
<b>Quadrant 1</b>	2 - Components	QFN48 - 48 Leads - 7x7mm body, Pitch 0.5mm
<b>Quadrant 2</b>	1 - Components	FBGA 244 with a thermal lug-19x19mm body, Pitch 1.0mm
<b>Quadrant 3</b>	0 - Components	Pin Headers - 20 Leads - Pitch 1.0mm
<b>Quadrant 4</b>	16 - Components	Chip Caps - 8 each of 0805 and 8 each of 0603 - 10 pF



Unless otherwise specified by design or by the User

- Acceptability of the residue condition shall (N1D2D3) be determined at the point of the manufacturing process just prior to the application of conformal coating or on the final assembly if conformal coating is not applied.
- Rework processes shall (N1D2D3) be included in the process qualification

### **MGX QMP Type B Test Board**

The Magnalytix QMP Type B SIR test board is an 8-channel mixed technology SIR Test Assembly. All Magnalytix QMP Test Cards have 4 SIR channels on the top side and 4 SIR channels on the bottom side. The Type B Card has bottom terminated components, BGA with a center lug, chip caps, and pin headers. This Medium complexity test board has challenging components representative of current designs. This test board enables the CM to obtain Objective Evidence required by the Design Authority.

### **MGX Testing Services**

Magnalytix offers independent testing at the MGX world-class Laboratory according to IPC Standards. After the testing is completed, MGX offers an In-Depth Report designed to be your Objective Evidence document for submission to your Design Authority.

The Comprehensive Report includes the following:

- Executive Summary
  - o Purpose and Objective
  - o Inferences from the Data Findings
  - o Recommendations
  - o Teams Meeting to go over the Data Findings and Corrective Action Recommendations if Needed
- Technical Summary
  - o Materials and Process Conditions
  - o Experimental Conditions
  - o SIR Test Parameters and Calibration
  - o SIR Data Findings
  - o Statistics
  - o Removal of Components to Correlate the Residue Condition to the SIR Data

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# **Join the Reliability Revolution**

## **Contact Us for your Objective Evidence**

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