

# MAGNALTIX<sup>®</sup>

## MGX QFN 11 SIR Test Board



### Practical Uses

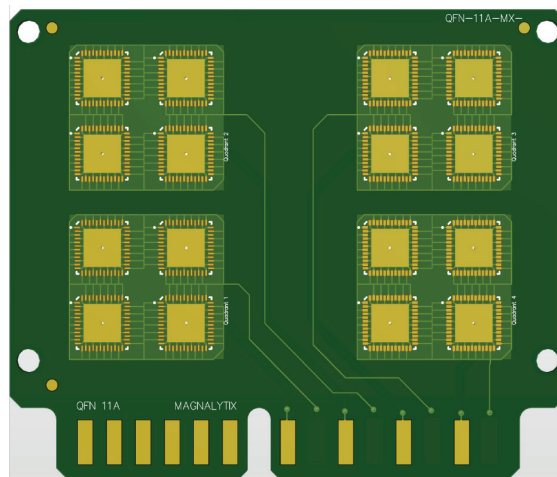
The Magnaltix QFN 11 SIR test board reduces signal pin pitch over the four quadrants. As the signal pin distance between opposite conductors narrows, the potential for current leakage increases. The tighter pitch equates to increases in the cubic volume of flux residue. The QFN 11 test board design is excellent for evaluating the benign nature of solder paste flux residue and assessing No-Clean solder pastes.

### Primary Uses

- No-Clean design
  - No Clean Solder Pastes
  - Electrochemical reliability when exposed to harsh environments

### Secondary Uses

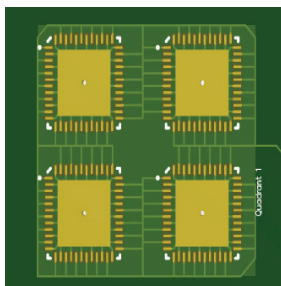
- Cleaning process
  - Cleaning agents
  - Cleaning tools
  - Partially cleaned flux residues



## Test Card Comparison

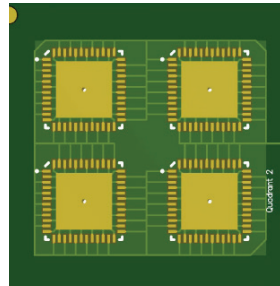
	MGX QFN 11 SIR Test Board	IPC B-52 SIR Test Board
<b>Quadrant 1</b>	QFN - 48 - 0.5 mm pitch - 12 mil space with 8 mil pad	Not Included
<b>Quadrant 2</b>	QFN - 48 - 0.5 mm pitch - 10 mil space with 10 mil pad	Not Included
<b>Quadrant 3</b>	QFN - 48 - 0.5 mm pitch - 8 mil space with 12 mil pad	Not Included
<b>Quadrant 4</b>	QFN - 48 - 0.5 mm pitch - 6 mil space with 14 mil pad	Not Included

## SIR Test Parameters



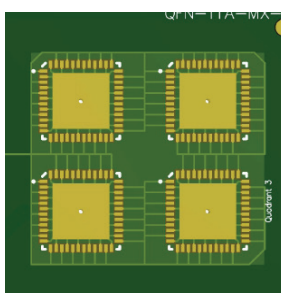
### QUADRANT 1

IPC-B-24 (0.4 mm lines, 0.5 mm Spaces)  
(16 mil line and 20 mil space)



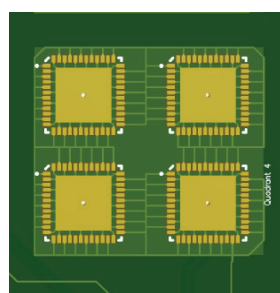
### QUADRANT 2

(0.4 mm lines, 0.4 mm space)  
(16 mil line and 16 mil space)



### QUADRANT 3

IPC-B-25A, pattern D  
(.32 mm line/space)  
(12.5 mil lines/spaces)



### QUADRANT 4

NPL Test Pattern (400 micron lines, 200 micron spaces)  
(16 mil line and 8 mil space)

## Component Descriptions

The Magnalytix QFN 11 SIR test board finds use in studying the effects of increased packaging densities and higher voltage. Surface Insulation Resistance is a direct measure of circuit reliability. Understanding the effects of residues trapped under component terminations can degrade electrical performance of the circuit is highly useful in characterizing and qualifying solder paste materials.

## MGX QFN 11 Test Set

Each Magnalytix Test Set includes the substrates and components to build complete assemblies needed for 1 standard testing cycle and provide the objective evidence needed to meet IPC J-STD-001G-Am1.

10 Each – MGX B-52 Legacy 2 PCB | Reel of 40 – MGX QFN48 | Reel of 10 – MGX BGA244  
Reel of 10 – MGX QFP160 | Reel of 100 – 10pF 0201 | Reel of 100 – 10pF 0402 | Reel of 100 – 10pF 0603  
Reel of 100 – 10pF 0805