

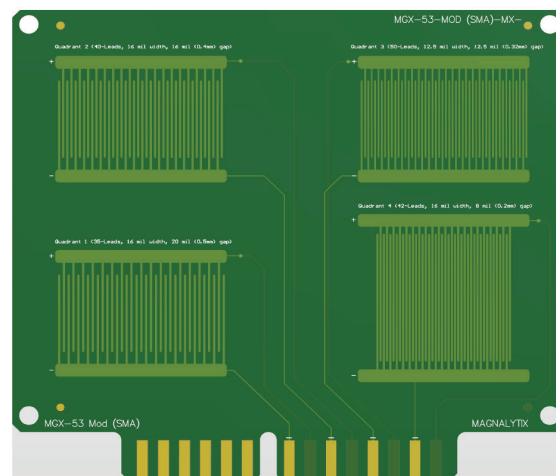
MAGNALYTIX[®]

MGX B-53 Type III SIR Test Board

Practical Uses

The Magnalytix B-53 Type III test board – similar in design to the B-24 test board - incorporates finer pitch SIR comb patterns in Channels C & D. The finer pitch comb patterns are used to test increased packaging densities, and in many cases higher voltages.

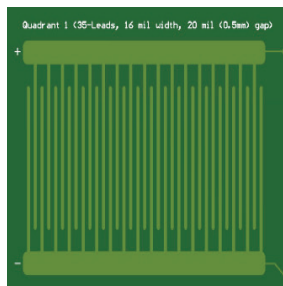
- The primary use of this test board is to test solder mask compatibility with both cleaning and conformal coating processes.
- Surface Insulation Resistance (SIR) identifies
 - Measurement of leakage currents across tighter spaces
 - Circuit reliability
 - Characterize and qualify soldering materials
- The MGX B-53 Type III Test board patterns exposes soldering materials to:
- Accelerated test environments of temperature and humidity under bias
 - SIR is measured between the two metal electrodes on an insulated surface
 - The SIR value is dependent on
 - Test Voltage (Field Strength)
 - Test pattern (Overlap and spacing)
 - Test environment (Temperature and Humidity)



Test Card Comparison

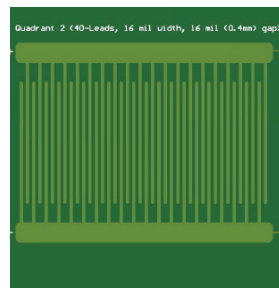
	MGX B-53 Type III SIR Test Board	IPC B-52 SIR Test Board
Quadrant 1	0.4 mm lines - 0.5 mm spaces	Included
Quadrant 2	0.4 mm lines - 0.5 mm spaces	Included
Quadrant 3	3.2 mm lines - 3.2 mm spaces	Not Included
Quadrant 4	0.4 mm lines - 0.2 mm spaces	Included

SIR Test Parameters



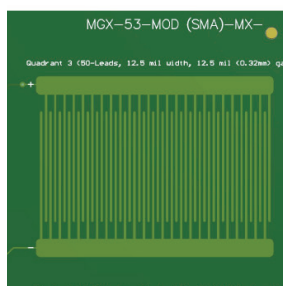
QUADRANT 1

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



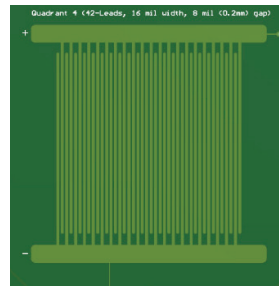
QUADRANT 2

(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 B-53 Type III SIR test board finds use in Materials Characterization and Process Control.

- This board can be used to validate bare board fabrication processes.
- This test board can be used for solder masks evaluations for IPC-SM-840.
- This test board can be used for solder mask compatibility studies.

MGX B-53 Type III 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