



Reliability Report

Report Title: AD2XX Material Set Change at IMI Qualification

Report Number: 20331

Revision: B

Date: 11 November 2022

Summary

This report documents the available qualification data for the release of AD2XX family of devices with conversion to Pb-free terminal finish at IMI. The AD2XX devices are a module family of precision wide bandwidth isolation amplifiers. The AD210 is the device vehicle for the qualification. Table 1 describes the AD210 product characteristics.

Table 1: AD210 Product Characteristics

Die/Fab

| | | |
|----------------------------|--------------------------|--------------------------|
| Die Id | 8YJ03A | H79 |
| Die Size (mm) | 0.80 x 1.35 | 1.47 x 1.65 |
| Quantity of Die in Module | 3 | 2 |
| Wafer Fabrication Site | ADI-Limerick | ADI-Limerick |
| Wafer Fabrication Process | 2.5um Bipolar | >2.0um CMOS |
| Passivation Layer | undoped-oxide/OxyNitride | undoped-oxide/OxyNitride |
| Bond Pad Metal Composition | AlCu | AlSi |

Package/Assembly

| | |
|----------------------------|--|
| Package | 12-PDIP |
| Body Size (mm) | 53.34 x 25.40 x 8.90 |
| Assembly Location | Integrated Microelectronics Inc. (IMI) |
| Molding Compound | NA |
| Adhesive Materials | Vitrobond EN484 / Sylgard 567 Part A and B |
| SMD Attach Material | Kester HM531 Sn63/Pb37 |
| Lead Frame Material | Copper |
| Lead Finish | Matte Sn |
| Moisture Sensitivity Level | NA |

Description / Results of Tests Performed

Table 2 provides a description of the qualification tests conducted and the associated test results for products manufactured on the same technologies as described in Table 1. All devices were electrically tested before and after each stress. Any device that did not meet all electrical data sheet limits following stressing would be considered a valid (stress-attributable) failure unless there was conclusive evidence to indicate otherwise.

Table 2: DIP Module at IMI Package Qualification Test Results

| Test Name | Specification | Conditions | Device | Lot # | Sample Size | Qty. Failures |
|--------------------------|---------------|------------------------------|--------|--------------|-------------|---------------|
| Temperature Cycling (TC) | JESD22-A104 | -40°C/+90°C, 1,000 Cycles | AD210 | Q20331.1.TC1 | 32 | 0 |

Samples of the many devices manufactured with these package and process technologies are continuously undergoing reliability evaluation as part of the ADI Reliability Monitor Program. Additional qualification data is available on [Analog Devices' web site](#).

Approvals

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Additional Information

Data sheets and other additional information are available on [Analog Devices' web site](#)