

# Reliability Report

**Product:**                    **ADIS16080**  
                                  **LGA Package Assembly**  
                                  **Transfer to IMI**

**PCN#:**                      **PCN 10\_0181**

**Date:**                      **05-April-11**



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# RELIABILITY REPORT FOR ADIS16080

Analog Devices  
Greensboro Manufacturing  
Greensboro, NC

## Introduction

This qualification was completed as a requirement for the ADIS16080 LGA Package assembly site transfer from Universal Scientific Inc. (USI) in Taiwan to Integrated Microelectronics Inc. (IMI) in the Philippines.

## Product Description

The ADIS16080 is a complete angular rate gyroscope that combines industry – leading MEMS® sensor technology with a signal processor that provides a convenient user interface, optimizes power dissipation and manages user operational controls. The ADIS16080 is packaged in a 8.2 mm x 8.2 mm x 5.2 mm Land Grid Array (LGA) package. The ADIS16003, ADIS16006 and ADIS16060 are similar to The ADIS16080 device in terms of assembly construction process, assembly materials and component configuration and are therefore considered qualified through extension of the ADIS16080.

## Device Characteristics

Greensboro Part Number .....	ADIS16080
Process.....	Epoxy chip attach on BT laminate substrate
Package Type.....	8.2 mm x 8.2 mm 16 leads Stacked Frame CSP LGA
Encapsulation Material .....	Hysol FP4470
Die Attach.....	Ablestik 84-3J Non-Conductive epoxy
Soldered Component Attach...	SN95/Sb5 Solder Paste
Wire Bonding.....	1.0 mil Gold wirebond
Assembly Location.....	IMI-Philippines
Test Location .....	ADI Greensboro, NC

## Description/Results of Tests Performed

Qualification tests and results appear in Table 1. All qualification samples were electrically tested for all defined parameters at +25°C at each endpoint. The qualification samples consisted of devices from the first engineering build from IMI Philippines.

**Table 1: ADI Qualification Results**

TEST NAME	TEST METHOD / CONDITIONS	SAMPLE SIZE	RESULTS
Temperature Cycle*	JESD22, Method A104 Condition G -40°C to +125°C 1000 cycles	32	Pass
Temperature/Humidity /Bias*	JESD22, Method A101 130°C / 85%RH 2atm Biased 96 hours	32	Pass
Cross Section Analysis*	GSD00086	10	Pass
Sample wire bond pull data	MIL-STD-883 Test Method 2011	3 devices	Pass
Sample final package physical dimensions	Applicable Product Dimension Specification	3	Pass

\*Preconditioned Per JEDEC/IPC J-STD-020D.1

## Conclusion

The ADIS16080, ADIS16003, ADIS16006, and ADIS16060 manufactured by IMI in the Philippines are accepted for production release.

	Quality Engineer	Quality Engineer Mgr.
By	David Hensley	Elaine Trotter
Signed	Signature on file	Signature on file
Date	05-April-11	05-April-11