



Reliability Report

Report Title: ADIS1657X Package Change

Report Number: 23419

Revision: A

Date: 24 March 2026

Summary

This report documents the successful completion of the reliability qualification requirements for the release of the ADIS16577 product. The ADIS16575/ADIS16576/ADIS16577 are a precision, microelectromechanical system (MEMS) inertial measurement unit (IMU) that includes a triaxial gyroscope and a triaxial accelerometer. Each inertial sensor in the ADIS16575/ADIS16576/ADIS16577 integrates signal conditioning to optimize dynamic performance. The factory calibration characterizes each sensor for sensitivity, bias, and alignment. Therefore, each sensor has dynamic compensation formulas that provide accurate sensor measurements over a broad set of conditions.

Product Characteristics

Table 1: Product Characteristics

Product Characteristics	Product
Generic	ADIS16577
Product	MEMS
Package	Aluminum Module Package
Package Size (mm)	24.30 x 22.40 x 13.70
Leads	14-lead connector interface
Assembly Site	IA1

Package/Assembly Test Results

Table 2: Package/Assembly Test Results

Test Name	Spec	Conditions	Generic	Lot #	Fail/SS
Mechanical Shock - Un-Powered ¹	MIL-STD-883, M2002	2000g, 5 shock pulses per axis orientation, 0.5ms, P48	ADIS16577	Q23419.1.3	0/15
Random Vibration ¹	MIL-STD-202, M214	Condition C=9.26grms, 8 hrs each x,y,z	ADIS16577	Q23419.2.1	0/15
Temperature Cycling (TC) ¹	JESD22-A104	-40/105, Soak3, 10-14C/min, 1,000 Cycles	ADIS16577	Q23419.1.4	0/32
Temperature Humidity Bias (THB) ¹	JESD22-A101	85°C 85%RH, Biased, 1,000 Hours	ADIS16577	Q23419.1.5	0/32

¹Electrical test was performed at Room/Hot/Cold temperature.

ESD Test Results**Table 3: ESD Test Result**

ESD Model	Generic	Package	ESD Test Spec	RC Network	Highest Pass Level	Class
FICDM	ADIS16577	AI Module	JS-002	1 Ω , Cpkg	\pm 1000V	C3

Approvals

Reliability Engineer: Carl Bunis