



Reliability Report

Report Title: ADIS16135 with New Underfill Qualification

Report Number: 21530

Revision: A

Date: 12 Feb 2024

Summary

This report documents the successful completion of the reliability qualification requirements for the release of ADIS16135 with new underfill material, FH8303. The ADIS16135 is a high performance, digital gyroscope sensing system that operates autonomously and requires no user configuration to produce accurate rate sensing data.

Package/Assembly Product Characteristics

Table 1: Package/Assembly Product Characteristics – 24-MCML at ENGENT

Product Characteristics	Product(s) to be Qualified
Generic/Root Part #	ADIS16135
Package	24-MCML
Body Size (mm)	36 x 44 x 14
Assembly Location	ENGENT
SMD Material	96.5Sn_3.0Ag_0.5Cu
Underfill Material	FH8303
Gyro Core	Process Code: IMEM3WL1M24.A0 Fab Site: I_WILM1B 06
Microcontroller	Process Code: 0.25E2P4M33.25 Fab Site: E_TSMC3C08

Package/Assembly Test Results

Table 2 shows the qualification results for product made with the same technology as shown in Table 1.

Table 2: ADIS16135 Test Results - 24-MCML at Engent

Test Name	Spec	Conditions	Generic/Root Part #	Lot #	Fail/SS
Temperature Cycling (TC)	JESD22-A104	-40°C/+105°C, 1,000 Cycles	ADIS16135	Q20530.TC1	0/16

Table 3: ADIS16135 Qualification Extension Data - 24-MCML at Engent

Test Name	Spec	Conditions	Generic/Root Part #	Lot #	Fail/SS
High Temperature Operating Life (HTOL)	JESD22-A108	Ta=85°C, Biased, 5,00 Hours	ADIS16136	TRB#20112069	0/16
Temperature Cycling (TC)	JESD22-A104	-40°C/+85°C, 500 Cycles	ADIS16136	TRB#20112069	0/15
		-40°C/+105°C, 500 Cycles	ADIS16135	Q21618.TC1	0/16

Approvals

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