TEST PRODUCT QUALIFICATION REPORT

TITLE:
Test Platform Migration of AD7357 TSSOP
From CTS5400 (ADGT) to Teradyne Catalyst (SCS)

PCN NUMBER:
14_0068

REVISION:
A

DATE:
09/12/2014

SUMMARY

AD7357 is a dual 14-bit high speed, low power successive approximation ADC which operates from a single 2.5V power supply and features throughput rates up to 4.2MSPS. This part has 2 ADCs, each preceded by a low noise, wide bandwidth track-and-hold circuit that can handle input frequencies in excess of 110MHz. AD7357 is available in a 16L thin shrink small outline package (TSSOP). Current test solution is running single-site on CTS5400_B in ADGT. The proposal is to do this testing dual site on a Teradyne Catalyst and transfer testing to STATS in Singapore. The benefits are: (a) freeing up CTS5400_B capacity which has constrained output, (b) take advantage of lower platform rate on Catalyst and (c) additional capacity in STATS as current shipment/deliverables in ADGT is capped. Teradyne Catalyst is an ADI-qualified ATE or test platform.

There is no change to the form, fit, function, quality or reliability of the transferred parts.

This report documents the result of the evaluations done to qualify Teradyne Catalyst as additional tester or ATE option to test AD7357, in addition to our existing CTS5400B system.

Test product qualification was performed according to Analog Devices Specification (TST00094/TST00095 – Test Platform Migration Specification)

TEST AND PRODUCT INFORMATION

Device:	AD7357
Package:	TSSOP
Leads:	16
Assembly Part name:	AD7357YRUC-A0WZ
Test Part name:	AD7357YRUCU-T0WZ
Catalog Part name:	AD7357WYRUZ/AD7357WYRUZ-RL
Tester Platform1:	CTS5400B
Tester Platform2:	Teradyne Catalyst
Handler1:	MT9308
Handler2:	MT9308

Description and Test Results (Taken from the – Test Platform Migration Criteria)

Table 1 & Table2 provide a description of the qualification tests conducted and corresponding test results for AD7357. All the units have undergone electrical tests on both the CTS5400B and Teradyne Catalyst test platforms. Any device that did not meet the electrical qualification requirements, without further analysis and data to prove passing the qualification would be considered failed.

Table 1: TST00095.0.1. Test Product Correlation Criteria

Generic	Package	Testing Site	CTS5400B Test Parameters (total)	Catalyst Test Parameters (total)	Mean Shift [(platform1 – platform2) / SW GB] < 1
AD7357	TSSOP	ADGT	133	133	Passed

Table 2: TST00095.0.2. Test Product Guard banding (GB) Criteria

Generic	Package	Testing Site	CTS5400B Test Parameters (total)	Catalyst Test Parameters (total)	Mean Shift <5% of Limit Range Sigma Spread = (Sigma_Old/Sigma_New) < 1.3
AD7357	TSSOP	ADGT	133	133	Passed

Table 3 shows results of the qualification lot run for AD7357. The qualification lot has undergone electrical test on both CTS5400B and Teradyne Catalyst test platforms. Any deviation on the lot qualification run criteria without further analysis and data to prove a passing qualification would be considered a failed qualification lot run.

Table 3: TST00095.0.3. Test Product Qualification Lot Run

GENERIC	Package	Lot number	Lot Size	Actual Quantity	Good units passed on both test platforms?	Reject units failed on the same test parameter for both test platforms?
AD7357	TSSOP	S891789.4	101	101	Yes	Yes
AD7357	TSSOP	S891563.4	115	115	Yes	Yes
AD7537	TSSOP	S892339.3	115	115	Yes	Yes

Conclusion

The correlation and lot validation exercise has been successfully completed. The conclusion is that the Teradyne Catalyst platform has been proven to be at par with the CTS5400 platform and the Catalyst is therefore suitable for release to production pending and awaiting customer approval.

Approvals

Test Transfer Technical Review Board

Supporting Documents

Technical Review Board: TRB#9765

Additional Information

Homepage: http://www.analog.com/en/index.html
Datasheet: http://www.analog.com/en/analog-to-digital-converters/ad-converters/ad7357/products/product.html