

TEST PRODUCT QUALIFICATION REPORT

TITLE:

Test Site Transfer of AD9945/44/43
From StatsChippac Singapore (SCS) to StatsChippac
Malaysia (SCM)

PCN 12_0226

REVISION:

A

DATE:

Aug/07/2012

PROJECT BACKGROUND

Test transfers are carried out to qualify additional supplier site for AD9943/4/5 during which volumes of the devices may have sudden increase, and where SCS capacity is a constraint.

SUMMARY

The AD994x family is complete analog signal processor for CCD applications. It features a single-channel architecture designed to sample and condition the outputs of interlaced and progressive scan area CCD arrays. The signal chain consists of a correlated double sampler (CDS), a digitally controlled variable gain amplifier (VGA), a black level clamp, and an A/D converter. Feature difference in table below:

Device	Sampling freq	A/D converter
AD9943	25Mhz	10-bit
AD9944	25Mhz	12-bit
AD9945	40Mhz	12-bit

The family of AD9945/44/43 share same test HW design and test methodology. We use AD9945 as a vehicle to qualify the device family to test in SCM. Same tester platform/test program will be used in both sending site and receiving site.

This report documents the successful completion of the product test transfer requirements for the release of AD9945/44/43 in SCM.

Test product qualification was performed according to Analog Devices Specification (TST0094 / TST000137 / New product transfer correlation spec TST0095)

TEST AND PRODUCT INFORMATION

Device: AD9945
Package: LFCSP
Leads: 32
Tester: Teradyne Catalyst
Handler: Delta Edge
Part names:

GENERIC	PARTNAME AFFECTED
AD9945	AD9945KCPZ
	AD9945KCPZRL7
AD9944	AD9944KCPZ
	AD9944KCPZRL
AD9943	AD9943KCPZ
	AD9943KCPZRL

Description and Test Results (Taken from the New Proposed Product Transfer Correlation Qual Criteria)

Table 1 provides a description of the qualification tests conducted and corresponding test results for AD9945. All the units have undergone electrical tests on both the sending and receiving sites on the same test platform. 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. Test Product Transfer Qual Criteria

Generic	Package	Lot number	Lot Size	Sending Site	Receiving Site	Mean Shift =< 5%	Sigma Ratio =< 1.3
AD9945	LFCSP	81893493.3	500	SCS	SCM	Passed	Passed

The AD9945 was qualified by running production lot in SCM. A passing result was recorded when the yields met or exceeded yields from similar lots tested in SCS. Result from validation run is summarized in Table 2.

Table 2. Test Product Transfer Qualification Lot Run

GENERIC	Package	Lot number	Lot Size	Test Site	Results
AD9945	CSP	2424770.1	2075	SCM	Passed

Approvals

Product Engineer: Michael Graham

Additional Information

Homepage: <http://www.analog.com>

Datasheet:

AD9945 - <http://www.analog.com/en/audiovideo-products/cameracamcorder-analog-front-ends/ad9945/products/product.html>

AD9943/44 - <http://www.analog.com/en/analog-to-digital-converters/ad-converters/ad9943/products/product.html>

Customer Service: http://www.analog.com/en/content/technical_support_page/fca.html

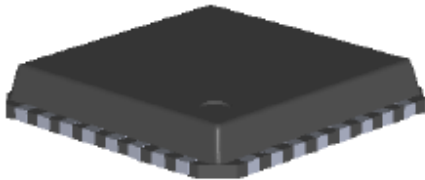
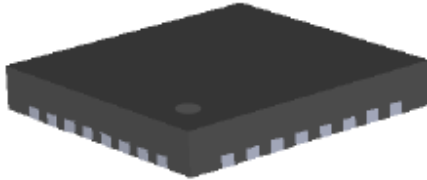


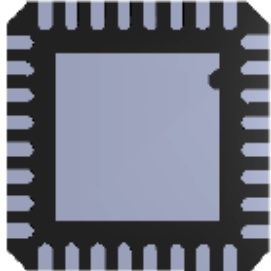
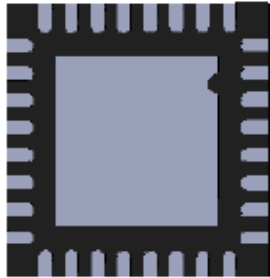
QUALIFICATION REPORT

TEST	CONDITIONS	SAMPLE SIZE	RESULTS
Autoclave (AC)*	JEDEC <i>JESD22-A102</i>	405	Pass
Highly Accelerated Stress Test (HAST)*	JEDEC <i>JESD22-A110</i>	405	Pass
Temperature Cycle (TC)*	JEDEC <i>JESD22-A104</i>	405	Pass
High Temperature Storage Life (HTSL)	JEDEC <i>JESD22-A103</i>	225	Pass
Solder Heat Resistance (SHR)*	<i>ADI-0049</i>	30	Pass
Latch-Up	JEDEC <i>JESD78</i>	6	Pass
Electrostatic Discharge <i>Field-Induced Charged Device Model</i>	JEDEC <i>JESD22-C101</i>	3/voltage	Pass <u>±</u> 1250V
Electrostatic Discharge <i>Human Body Model</i>	ESDA Assoc. STM5.1-1998	3/voltage	Pass <u>±</u> 4000V
Electrostatic Discharge <i>Machine Model</i>	ESDA Assoc. STM5.2-1999	3/voltage	Pass <u>±</u> 200V

*Preconditioned per JEDEC/IPC J-STD-020



Package Outline (Punch and Sawn LFCSP)

COMPARISON	CURRENT	NEW	REMARKS
Package	Punch	Sawn	
Figure			Punch has flange edges. Sawn has sharp square edges.
Thickness	0.85 mm (Nom.) 	0.75 mm (Nom.) 	Sawn is Thinner
Foot Print			Lead width and length dimensions and tolerances are the same.