



## Product/Process Change Notice - PCN 11\_0314 Rev. A

Analog Devices, Inc. Three Technology Way Norwood, Massachusetts 02062-9106

This notice is to inform you of a change that will be made to certain ADI products (see Material Report). Any issues with this PCN or requirements to qualify the change (additional data or samples) must be sent to ADI within 30 days of publication date. ADI contact information is listed below.

*Note: Revised fields are indicated by a red field name. See Appendix B for revision history.*

**PCN Title:** AD5390/1/2 Redesign and Fab Process Change  
**Publication Date:** 16-May-2012  
**Effectivity Date:** 16-May-2012 *(the earliest date that a customer could expect to receive changed material)*

### Revision Description:

Include effectivity date-code

### Description Of Change

Wafer fabrication change from the 6" 0.5um process at Taiwan Semiconductor Manufacturing Company (TSMC), to the 8" 0.35um process at Analog Devices Limerick Ireland, involving an all-layer change/redesign.

This redesign will result in the following data sheet specification changes:

Change in Gain Error spec from +/-0.024 % FSR max to +/-0.05 % FSR max

Change in DC Crosstalk spec from 0.5 LSB max to 0.6 LSB max

Change in Reference Output Impedance spec from 2.2kohm typ to 800ohm typ

Change in DC Output Impedance spec from 0.5ohm max to 0.6ohm max

Change in Vil input low voltage spec for logic inputs as follows:

From 0.8V max at DVdd = 2.7V to 5.5V to 0.6V max at DVdd <= 3.6V and 0.8V max at DVdd > 3.6V

Change in Aldd Power-Down spec from 1uA max to 20uA max

Change in Output Voltage Settling Time spec from 8us/6us typ and 10us/8us max, to 3us typ and 8us max

Change in Slew Rate spec as follows:

From: 2 V/us typ (Boost mode off) and 3 V/us typ (Boost mode on)

To: 1.5 V/us typ (Boost mode off) and 2.5 V/us typ (Boost mode on)

Change in t14 /BUSY rising edge to DAC output response time spec from 100ns max to 2us max

Change in t19 /CLR pulse activation time spec from 12us max to 40us max

### Reason For Change

Increased manufacturing flexibility and capacity

### Impact of the change (positive or negative) on fit, form, function & reliability

Minimal impact on fit, form, function & reliability of the AD5390, AD5391 or AD5392 devices.

### Product Identification *(this section will describe how to identify the changed material)*

Switch-over to new silicon can be traced by means of the assembly date-code branded on the package as follows:

All AD5390 models: date-code 1217 or later (with the exception of date-code 1213)

All AD5391 models: date-code 1217 or later (with the exception of date-code 1213)

All AD5392 models: date-code 1217 or later (with the exception of date-code 1213)

## Summary of Supporting Information

Qualification has been performed per ADI0012, Procedure for Qualification of New or Revised Processes. See attached Qualification Report Summary.

## Supporting Documents

**Attachment 1:** Type: Qualification Report Summary

ADI\_PCN\_11\_0314\_Rev\_A\_PCN\_QUALIFICATION\_DATA.pdf

**For questions on this PCN, send email to the regional contacts below or contact your local ADI sales representative**

<b>Americas:</b>	PCN_Americas@analog.com	<b>Europe:</b>	PCN_Europe@analog.com	<b>Japan:</b>	PCN_Japan@analog.com
				<b>Rest of Asia:</b>	PCN_ROA@analog.com

## Appendix A - Affected ADI Models

### Existing Parts - Product Family / Model Number (18)

AD5390 / AD5390BCPZ-3	AD5390 / AD5390BCPZ-3-REEL	AD5390 / AD5390BCPZ-3-REEL7	AD5390 / AD5390BCPZ-5	AD5390 / AD5390BCPZ-5-REEL
AD5390 / AD5390BCPZ-5-REEL7	AD5390 / AD5390BSTZ-3	AD5390 / AD5390BSTZ-5	AD5391 / AD5391BCPZ-3	AD5391 / AD5391BCPZ-5
AD5391 / AD5391BCPZ-5-REEL	AD5391 / AD5391BCPZ-5-REEL7	AD5391 / AD5391BSTZ-3	AD5391 / AD5391BSTZ-5	AD5392 / AD5392BCPZ-3
AD5392 / AD5392BCPZ-5	AD5392 / AD5392BSTZ-3	AD5392 / AD5392BSTZ-5		

## Appendix B - Revision History

Rev	Publish Date	Rev Description
Rev. -	20-Dec-2011	Initial Release
Rev. A	16-May-2012	Include effectivity date-code

Analog Devices, Inc.

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