



# Product/Process Change Notice - PCN 08\_0040 Rev. C

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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 receiving this notification. The information contained within this PCN is considered proprietary and should not be shared outside of your company. ADI contact information is listed below.

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

**PCN Title:** AD7417 Functionality Improvement

**Publication Date:** 18-Dec-2008

**Samples Available Date:** 28-Nov-2008

**Effectivity Date:** 27-Feb-2009 (the earliest date that a customer could expect to receive changed material)

## Description Of Change

1. Power On Reset  
The edit to the power on reset will ensure that for certain supply profiles (a combination of ramp up/down times, the size of the voltage dip and the duration of the dip) the power on reset block is activated to ensure the AD7417 behaves predictably. The Edit involves an all layer change where the existing power on reset block was replaced with two independent POR blocks (which are OR'd together for extra reliability) which represent the state of the art within ADI on this process node. The edit is localized to a small area of the die. The additional current consumed by the POR circuitry means that the maximum powerdown IDD specification will increase from 1uA to 1.5uA. Typical powerdown current will be 700nA.

2. Serial Interface  
The edit to the serial bus controller makes a minor change to a state machine and will allow correct operation of the serial bus during fault conditions. This required an all layer change to introduce 2 digital gates into the serial bus design. As with the POR edit the design was copied from a proven design on the process.

REV B DECEMBER 2008 UPDATE: Results from characterisation and yield analysis have shown that the datasheet specification for powerdown IDD must increase from 1 to 1.5uA. The datasheet is being revised accordingly. All samples sent to customers under the existing PCN (Rev. A) have used the final silicon and are representative of this datasheet change so no additional sampling is required.

## Reason For Change

Improved product performance as a result of wafer fab transfer.

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

The only datasheet specification change concerns Powerdown IDD. Typical value increases to 700nA. Maximum value increases to 1.5uA (from 1uA). All other datasheet specifications are unaffected.

## Summary of Supporting Information

1. Power On Reset: Evaluation to date has included testing 3 parts from one lot over voltage and temperature extremes with a matrix of rise and fall time to confirm the fix vs. the old silicon. Testing over supply and temperature on 100 units from the same single lot has confirmed that the edit has left all other specifications (other than powerdown IDD) unchanged.

2. Serial Interface: Silicon characterization was carried out on 3 parts from 1 lot at voltage and temperature extremes to confirm the specific fix. Yield analysis on 100 parts from the same lot confirmed that the fix did not impact other specifications. ESD and LU testing confirmed that (as expected) the part is unaffected by this redesign.

**Supporting Documents** None

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 (19)**

AD7417 / AD7417ACHIPS	AD7417 / AD7417AR	AD7417 / AD7417AR-REEL	AD7417 / AD7417AR-REEL7	AD7417 / AD7417ARU	AD7417 / AD7417ARU-REEL
AD7417 / AD7417ARU-REEL7	AD7417 / AD7417ARUZ	AD7417 / AD7417ARUZ-REEL	AD7417 / AD7417ARUZ-REEL7	AD7417 / AD7417ARZ	AD7417 / AD7417ARZ-REEL
AD7417 / AD7417ARZ-REEL7	AD7417 / AD7417BR	AD7417 / AD7417BR-REEL	AD7417 / AD7417BR-REEL7	AD7417 / AD7417BRZ	AD7417 / AD7417BRZ-REEL
AD7417 / AD7417BRZ-REEL7					

**Appendix B - Revision History**

<b>Rev</b>	<b>Publish Date</b>	<b>Rev Description</b>
Rev. -	21-Apr-2008	Initial Release
Rev. A	09-Jul-2008	Updating effectivity date to 20 Oct 08
Rev. B	18-Dec-2008	Rev. B December 2008: Powerdown IDD increase from 1 to 1.5uA
Rev. C	18-Dec-2008	Correct Effectivity Date to 27-Feb-2009

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