



## Product/Process Change Notice - PCN 19\_0097 Rev. -

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 Appendix A) that you may have purchased in the last 2 years. **Any inquiries or requests with this PCN (additional data or samples) must be sent to ADI within 30 days of publication date.** ADI contact information is listed below.

**PCN Title:** Data Sheet and Die Revision for AD9171/AD9172/AD9173  
**Publication Date:** 25-Jun-2019  
**Effectivity Date:** 27-Sep-2019 *(the earliest date that a customer could expect to receive changed material)*

**Revision Description:**  
Initial Release.

### Description Of Change:

1. Added buffers to the direct clock path.
2. Clock redesign of the HB filters.
3. Improved digital layout.
4. Changed default value for SPI register 0x006 from value 0x2 to value 0x4. See "REGISTER SUMMARY" table in the relevant product data sheet.

### Reason For Change:

1. Improve performance of the duty cycle control loop.
2. Reduces spurious levels at Fs/32, Fs/48, and Fs/64.
3. Digital layout re-synthesized due to change #2.
4. Indicates the die revision "4a" of the new material

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

1. Improves close-in Phase Noise performance, when using direct-clock mode.
2. Reduces spurious levels at Fs/32, Fs/48, and Fs/64. increases spurious levels at Fs/8, Fs/12, and Fs/16.
3. Improved power consumption on the DVDD1.0 supply domain.
4. SPI register value change. No impact otherwise

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

SPI register read of register 0x006 shall return a value of 0x4.

### Summary of Supporting Information:

Qualification has been performed per Industry Standard Test Methods. See attached Qualification Results Summary. Data Sheet changes will be reflected in revision B of the Product Data Sheet.

### Supporting Documents

**Attachment 1: Type:** Qualification Results Summary

ADI\_PCN\_19\_0097\_Rev\_-\_Qualification Results Summary\_AD9171\_AD9172\_AD9173.pdf

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

**Americas:**  
PCN\_Americas@analog.com

**Europe:**  
PCN\_Europe@analog.com

**Japan:**  
PCN\_Japan@analog.com

**Rest of Asia:**  
PCN\_ROA@analog.com

**Appendix A - Affected ADI Models**

**Added Parts On This Revision - Product Family / Model Number (10)**

AD9171 / AD9171-FMC-FX3-EBZ	AD9171 / AD9171BBPZ	AD9171 / AD9171BBPZRL	AD9172 / AD9172BBPZ	AD9172 / AD9172BBPZRL
AD9172 / AD9172HUAWEI-DIE	AD9173 / AD9173-FMC-FX3-EBZ	AD9173 / AD9173-FX3-EBZ	AD9173 / AD9173BBPZ	AD9173 / AD9173BBPZRL

**Appendix B - Revision History**

<b>Rev</b>	<b>Publish Date</b>	<b>Effectivity Date</b>	<b>Rev Description</b>
Rev. -	25-Jun-2019	27-Sep-2019	Initial Release.

Analog Devices, Inc.

DocId:6708 Parent DocId:4664 Layout Rev:7

## Die Revision for AD9171/AD9172/AD9173

### Qualification Results Summary of AD9171/AD9172/AD9173 Die Revision

QUALIFICATION PLAN / STATUS			
TEST	SPECIFICATION	SAMPLE SIZE	RESULTS
Solder Heat Resistance (SHR)*	JEDEC/IPC <i>J-STD-020</i>	<b>1*30</b>	<b>Pass</b>
Latch-Up	JEDEC <i>JESD78</i>	<b>1*9</b>	<b>Pass</b>
Electrostatic Discharge <i>Human Body Model</i>	ESDA/JEDEC <i>JS-001</i>	<b>3/voltage</b>	<b>Pass ±500V</b>
Electrostatic Discharge <i>Field-Induced Charged Device Model</i>	JEDEC <i>JS-002</i>	<b>3/voltage</b>	<b>Pass ±2000V</b>

\*Preconditioned per JEDEC/IPC J-STD-020, MSL 3, Max Peak Reflow Temp of 260C