



Product/Process Change Notice - PCN 20_0020 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: AD9161/AD9162/AD9163/AD9164 Die Revision

Publication Date: 30-Jan-2020

Effectivity Date: 03-May-2020 *(the earliest date that a customer could expect to receive changed material)*

Revision Description:

Initial Release.

Description Of Change:

The decoding logic of the Delay Locked Loop (DLL) controller of the DAC clock was modified from binary code to Grey code.

Reason For Change:

The decoding logic of the thermometer controller of the DLL circuit was modified to reduce the rare possibility of the DLL not correctly incrementing the code. This improves the quality of the phase output of the Direct Digital Synthesizer (DDS) and prevents any glitch at the output.

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

No impact on fit, form, function, and reliability. The DLL functionality is improved.

Summary of Supporting Information:

Qualification has been performed per Industry Standard Test Methods. See attached Qualification Results Summary.

Supporting Documents

Attachment 1: Type: Qualification Results Summary

ADI_PCN_20_0020_Rev_-_Qualification Results Summary AD9161_62_63_64.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 (16)

AD9161 / AD9161BBCZ	AD9161 / AD9161BBCZRL	AD9162 / AD9162BBCA	AD9162 / AD9162BBCARL	AD9162 / AD9162BBCAZ
AD9162 / AD9162BBCAZRL	AD9162 / AD9162BBCZ	AD9162 / AD9162BBCZRL	AD9163 / AD9163BBCZ	AD9163 / AD9163BBCZRL
AD9164 / AD9164BBCA	AD9164 / AD9164BBCARL	AD9164 / AD9164BBCAZ	AD9164 / AD9164BBCAZRL	AD9164 / AD9164BBCZ
AD9164 / AD9164BBCZRL				

Appendix B - Revision History

Rev	Publish Date	Effectivity Date	Rev Description
Rev. -	30-Jan-2020	03-May-2020	Initial Release.

Analog Devices, Inc.

DocId:7969 Parent DocId:6700 Layout Rev:7

Qualification Results Summary of AD9161/AD9162/AD9163/AD9164 Die Revision

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

*Preconditioned per JEDEC/IPC J-STD-020

⁺See reliability report for passing values