



Product/Process Change Notice - PCN 20_0327 Rev. -

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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: ADPD188BI Calibration Process Change and Revision to Application Note AN-2033

Publication Date: 04-Jan-2021

Effectivity Date: 08-Apr-2021 *(the earliest date that a customer could expect to receive changed material)*

Revision Description:

Initial Release.

Description Of Change:

A new calibration process for ADPD188BI is being implemented to further reduce device to device variation. Application note AN-2033 Rev 0 is being updated to add the new calibration process information. AN-2033 Rev 0 will be revised to AN-2033 Rev A. AN-2033 Rev A will include both existing and new calibration process information.

The calibration process measures each devices' performance and stores the information in the eFuse registers of that device. Equations are provided by ADI to apply the calibration coefficients to device readings.

The existing calibration process stores the following information in the eFuse registers of each device.

1. Module ID = 30 or 31.
2. Calibration Coefficients – to correct for device variation.
3. Error Correction Code (ECC) – to detect and correct errors in stored eFuse register values.

The eFuse register information for the existing calibration process along with equations to apply the existing calibration coefficients are currently described in AN-2033 Rev 0.

The new calibration process will store the following information in the eFuse registers of each device.

1. Module ID = 33
2. New Calibration Coefficients – to correct for device variation.
3. Error Correction Code (ECC) – to detect and correct errors in stored eFuse register values.
4. 32kHz clock best trim code - to tune the clock frequency to 32kHz
5. 32MHz clock best trim code - to tune the clock frequency to 32MHz

The eFuse register information for the new calibration process along with new equations to apply the new calibration coefficients will be added to AN-2033 Rev A.

A software routine to help users integrate the new calibration information into their designs will also be added to AN-2033.

Reason For Change:

Calibration process is changed to further reduce device to device variation.

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

This change will improve system accuracy for customers. Customers who are using ADPD188BI calibration coefficients should modify their software to correctly apply the new coefficients and new equations that correspond to the new calibration process.

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

Parts will be calibrated with new process after effectivity date.

Summary of Supporting Information:

Attached document provides more technical information about the calibration process change. It describes the existing and new calibration process information in detail. It also provides example code for users to integrate the new calibration process into their software.

Supporting Documents

Attachment 1: Type: Detailed Change Description

ADI_PCN_20_0327_Rev_-_ADPD188BI_PCN_Calibration_Process_Change_Technical_Info.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:
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Rest of Asia:
PCN_ROA@analog.com

Appendix A - Affected ADI Models

Added Parts On This Revision - Product Family / Model Number (3)

ADPD188BI / ADPD188BI-ACEZR7

ADPD188BI / ADPD188BI-ACEZRL

ADPD188BI / ADPD188BI-XCEZ

Appendix B - Revision History

Rev	Publish Date	Effectivity Date	Rev Description
Rev. -	04-Jan-2021	08-Apr-2021	Initial Release.

Analog Devices, Inc.

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