



Product/Process Change Notice - PCN 14_0178 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 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.

PCN Title: Conversion of 3x3mm, 4x4mm and 5x5mm LFCSP Package Outlines from Punch to Sawn and Transfer of Assembly Site to Amkor Philippines

Publication Date: 03-Oct-2014

Effectivity Date: 01-Jan-2015 *(the earliest date that a customer could expect to receive changed material)*

Revision Description:

Initial Release

Description Of Change

ADI has qualified and will be utilizing Assembly subcontractor Amkor in the Philippines for select 3x3mm, 4x4mm and 5x5mm LFCSP products. ADI has also qualified Amkor's standard bill of materials in a SAWN singulated leadframe. There will be no change to the BOM. Pin1 indicator will be laser marked as part of the change. See attached for changes and package outline differences.

Reason For Change

Sawn LFCSP is ADI's technology direction for LFCSP. The use of ADI qualified Amkor-Philippines as an assembly site will ensure continued source of product supply. ADI's assembly subcontractors manufacture our products using Analog Devices specified manufacturing flows, process controls and monitors. This assures that our customers receive the same level of quality and reliability on products they receive from qualified ADI manufacturing locations.

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

The devices function and reliability as specified by the product datasheet will be unaffected by these changes. The Lead Foot Print Dimension will remain the same for both punch and sawn LFCSP packages

Summary of Supporting Information

Qualification has been performed per AEC-Q100, Stress Test Qualification for Integrated Circuits. See attached Qualification Results Summary.

Supporting Documents

Attachment 1: Type: Qualification Results Summary

ADI_PCN_14_0178_Rev_-_Qualification Summary Attachment.pdf

Attachment 2: Type: Detailed Change Description

ADI_PCN_14_0178_Rev_-_BOM.pdf

Attachment 3: Type: Package Outline Drawing

ADI_PCN_14_0178_Rev_-_Package Outline Drawing.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 (41)

AD7147 / AD7147ACPZ-1500RL7	AD7147 / AD7147ACPZ-1REEL	AD7147 / AD7147ACPZ-500RL7	AD7147 / AD7147ACPZ-REEL	AD7147 / AD7147PACPZ-1500R7
AD7147 / AD7147PACPZ-1RL	AD7147 / AD7147PACPZ-500R7	AD7147 / AD7147PACPZ-RL	AD7147 / AD7147WPACPZ-1500R	AD7147 / AD7147WPACPZ-1RL
AD7147 / AD7147WPACPZ-500R7	AD7147 / AD7147WPACPZ-RL	AD7877 / AD7877WACPZ-REEL7	AD7879 / AD7879-1ACPZ-500R7	AD7879 / AD7879-1ACPZ-RL
AD7879 / AD7879-1WACPZ-RL	AD7879 / AD7879-1WACPZ-RL7	AD7879 / AD7879ACPZ-500R7	AD7879 / AD7879ACPZ-RL	AD7879 / AD7879WACPZ-R5
AD7879 / AD7879WACPZ-RL	AD8145 / AD8145WYCPZ-R7	AD8231 / AD8231ACPZ-R7	AD8231 / AD8231ACPZ-RL	AD8231 / AD8231WACPZ-RL
AD8465 / AD8465WBCPZ-R7	AD8556 / AD85560002CPZR7	AD8556 / AD8556ACPZ-R2	AD8556 / AD8556ACPZ-REEL	AD8556 / AD8556ACPZ-REEL7
ADA4853-3 / ADA4853-3WYCPZ-R7	ADF4193 / ADF4193WCCPZ-RL7	ADG1411 / ADG1411WBCPZ-REEL	ADG1411 / ADG1411YCPZ-REEL	ADG1411 / ADG1411YCPZ-REEL7
ADG2128 / ADG2128WBCPZ-REEL7	ADG2188 / ADG2188BCPZ-HS-RL7	ADG2188 / ADG2188BCPZ-REEL7	ADG2188 / ADG2188YCPZ-HS-RL7	ADG2188 / ADG2188YCPZ-REEL7
ADG2188 / ADW54012Z-0REEL7				

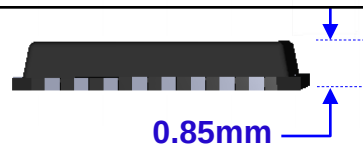
Appendix B - Revision History			
Rev	Publish Date	Effectivity Date	Rev Description
Rev. -	03-Oct-2014	01-Jan-2015	Initial Release

Analog Devices, Inc.

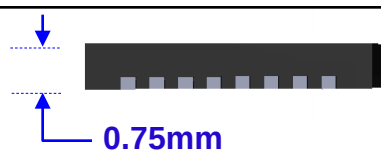
DocId:3013 Parent DocId:3012 Layout Rev:7

Package Outline Drawing (5x5mm)

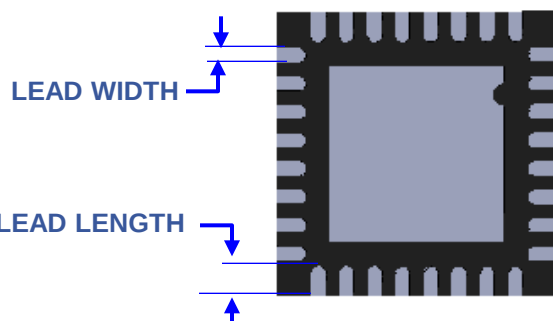
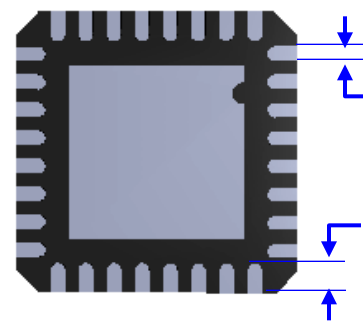
PUNCH



SAWN



Package Thickness Difference

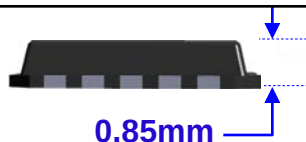


Exposed Pad, Lead Length and Lead Width dimensions remains within tolerance.

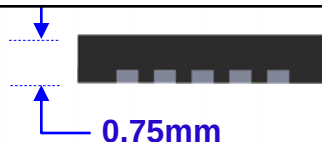
Body Size (mm)	Lead Count	FROM: Punch Type LFCSP				TO: Sawn Type LFCSP			
		POD Spec	E-Pad Size (mm SQ.)	Lead Length (mm)	Lead Width (mm)	POD Spec	E-Pad Size (mm SQ.)	Lead Length (mm)	Lead Width (mm)
5x5	32	CP 32-2	3.1 ± 0.15	0.40 ± 0.15	0.25 ^{+0.05} _{-0.07}	CP 32-7	3.1 ± 0.15	0.40 ± 0.10	0.25 ^{+0.05} _{-0.07}

Package Dimensions (4x4mm)

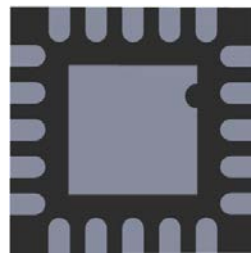
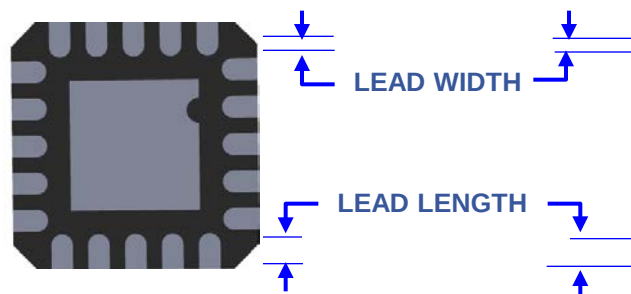
PUNCH



SAWN



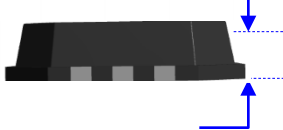
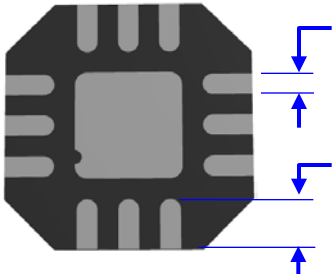
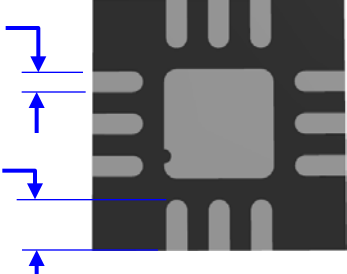
Package Thickness Difference



Exposed Pad, Lead Length and Lead Width dimensions remains within tolerance.

Body Size (mm)	Lead Count	Punch Type LFCSP				Sawn Type LFCSP			
		POD Spec	E-Pad Size (mm SQ.)	Lead Length (mm)	Lead Width (mm)	POD Spec	E-Pad Size (mm SQ.)	Lead Length (mm)	Lead Width (mm)
4x4	16	CP 16-4	2.3 ± 0.15	0.60 ^{+0.15} _{-0.10}	0.30 ±0.05	CP 16-23	2.3 ± 0.15	0.60 ± 0.10	0.30 ±0.05
		CP 16-10	2.35 ± 0.15	0.40 ±0.10	0.30 ±0.05	CP 16-20	2.35 ±0.10	0.40 ±0.10	0.30 ±0.05
		CP 16-13	2.5 ± 0.15	0.40 ±0.10	0.23 ^{+0.07} _{-0.05}	CP 16-26	2.5 ±0.10	0.40 ±0.10	0.30 ±0.05
4x4	24	CP 24-3	2.5 ± 0.15	0.40 ±0.10	0.23 ^{+0.07} _{-0.05}	CP 24-7	2.5 ± 0.15	0.40 ±0.10	0.25 ^{+0.05} _{-0.07}

Package Dimensions (3x3mm)

PUNCH	SAWN	
 0.85mm	 0.75mm	Package Thickness Difference
 LEAD WIDTH LEAD LENGTH		Exposed Pad, Lead Length and Lead Width dimensions remains within tolerance.

Body Size (mm)	Lead Count	Punch Type LFCSP				Sawn Type LFCSP			
		POD Spec	E-Pad Size (mm SQ.)	Lead Length (mm)	Lead Width (mm)	POD Spec	E-Pad Size (mm SQ.)	Lead Length (mm)	Lead Width (mm)
3x3	12	CP 12-3	1.5 ± 0.15	0.60 ^{+0.15} _{-0.10}	0.23 ^{+0.07} _{-0.05}	CP 12-5	1.5 ± 0.15	0.40 ± 0.10	0.23 ^{+0.07} _{-0.05}
3x3	16	CP 16-2	1.3 ± 0.15	0.40 ± 0.10	0.23 ^{+0.07} _{-0.05}	CP 16-21	1.3 ± 0.15	0.40 ± 0.10	0.23 ^{+0.07} _{-0.05}
		CP 16-3	1.5 ± 0.15	0.40 ± 0.10	0.23 ^{+0.07} _{-0.05}	CP 16-27	1.5 ^{+0.15} _{-0.05}	0.40 ± 0.10	0.25 ^{+0.05} _{-0.07}

Package Outline Drawing (POD) Conversion Details

FG_PART	Package Dimensions	LEADS	POD Punch	POD Sawn
AD8465WBCPZ-R7	3x3mm	12	CP-12-3	CP-12-5
ADA4853-3WYCPZ-R7	3x3mm	16	CP-16-3	CP-16-27
AD7879-1ACPZ-500R7	4x4mm	16	CP-16-10	CP-16-20
AD7879-1ACPZ-RL	4x4mm	16	CP-16-10	CP-16-20
AD7879-1WACPZ-RL	4x4mm	16	CP-16-10	CP-16-20
AD7879-1WACPZ-RL7	4x4mm	16	CP-16-10	CP-16-20
AD7879ACPZ-500R7	4x4mm	16	CP-16-10	CP-16-20
AD7879ACPZ-RL	4x4mm	16	CP-16-10	CP-16-20
AD7879WACPZ-R5	4x4mm	16	CP-16-10	CP-16-20
AD7879WACPZ-RL	4x4mm	16	CP-16-10	CP-16-20
AD85550002CPZR7	4x4mm	16	CP-16-10	CP-16-20
AD8556ACPZ-R2	4x4mm	16	CP-16-10	CP-16-20
AD8556ACPZ-REEL	4x4mm	16	CP-16-10	CP-16-20
AD8556ACPZ-REEL7	4x4mm	16	CP-16-10	CP-16-20
ADG1411WBCPZ-REEL	4x4mm	16	CP-16-13	CP-16-26
ADG1411YCPZ-REEL	4x4mm	16	CP-16-13	CP-16-26
ADG1411YCPZ-REEL7	4x4mm	16	CP-16-13	CP-16-26
AD8231ACPZ-R7	4x4mm	16	CP-16-4	CP-16-23
AD8231ACPZ-RL	4x4mm	16	CP-16-4	CP-16-23
AD8231WACPZ-RL	4x4mm	16	CP-16-4	CP-16-23

FG_PART	Package Dimensions	LEADS	POD Punch	POD Sawn
AD7147ACPZ-1500RL7	4x4mm	24	CP-24-3	CP-24-7
AD7147ACPZ-1REEL	4x4mm	24	CP-24-3	CP-24-7
AD7147ACPZ-500RL7	4x4mm	24	CP-24-3	CP-24-7
AD7147ACPZ-REEL	4x4mm	24	CP-24-3	CP-24-7
AD7147PACPZ-1500R7	4x4mm	24	CP-24-3	CP-24-7
AD7147PACPZ-1RL	4x4mm	24	CP-24-3	CP-24-7
AD7147PACPZ-500R7	4x4mm	24	CP-24-3	CP-24-7
AD7147PACPZ-RL	4x4mm	24	CP-24-3	CP-24-7
AD7147WPACPZ-1500R	4x4mm	24	CP-24-3	CP-24-7
AD7147WPACPZ-1RL	4x4mm	24	CP-24-3	CP-24-7
AD7147WPACPZ-500R7	4x4mm	24	CP-24-3	CP-24-7
AD7147WPACPZ-RL	4x4mm	24	CP-24-3	CP-24-7
AD7877WACPZ-REEL7	5x5mm	32	CP-32-2	CP-32-7
AD8145WYCPZ-R7	5x5mm	32	CP-32-2	CP-32-7
ADF4193WCCPZ-RL7	5x5mm	32	CP-32-2	CP-32-7
ADG2128WBCPZ-REEL7	5x5mm	32	CP-32-2	CP-32-7
ADG2188BCPZ-HS-RL7	5x5mm	32	CP-32-2	CP-32-7
ADG2188BCPZ-REEL7	5x5mm	32	CP-32-2	CP-32-7
ADG2188YCPZ-HS-RL7	5x5mm	32	CP-32-2	CP-32-7
ADG2188YCPZ-REEL7	5x5mm	32	CP-32-2	CP-32-7
ADW54012Z-0REEL7	5x5mm	32	CP-32-2	CP-32-7