



Product/Process Change Notice - PCN 22_0157 Rev. -

Analog Devices, Inc. One Analog Way, Wilmington, MA 01887

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: UTAC Thai Limited (UTL) as Alternate Assembly Site for MSOP Packages [With Modification in BOM]

Publication Date: 12-Jul-2022

Effectivity Date: 14-Oct-2022 *(the earliest date that a customer could expect to receive changed material)*

Revision Description:

Initial Release

Description Of Change:

- Adding UTAC Thai Limited (UTL) as an alternate assembly site for specific MSOP devices being manufactured in Penang, Malaysia (ADPG).
- Die attached material and mold compound will be changed.
- List of devices with the changes in die attach material and mold compound are described in Attachment 3.

Reason For Change:

Supply chain resilience alternate assembly site to mitigate supply chain risk to customer.

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

No impact on fit, form, function and reliability.

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

Products assembled in UTAC Thai Limited (UTL) can be identified by the country of origin marked on the packaging label.

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_22_0157_Rev_-_Automotive MSOP Assembly Transfer to UTAC (UT3) Rel Summary.pdf

Attachment 2: Type: Delta Qualification Matrix

ADI_PCN_22_0157_Rev_-_BOM Change MSOP Transfer to UTAC from ADI Penang PCN-Delta-Qualification-Matrix-ZVEI-5_0_9.xlsm

Attachment 3: Type: Detailed Parts List

ADI_PCN_22_0157_Rev_-_List of affected parts with difference BOM.xlsx

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 (246)				
LT1715S / LT1715HMS#3ZYPBF	LT1720 / LT1720IMS#3ZZPBF	LT1767 / LT1767EMS-3.3#PBF	LT1767 / LT1767EMS-3.3#TRMPBF	LT1767 / LT1767EMS-3.3#TRPBF
LT1912 / LT1912EMSE#3FWPBF	LT1936 / LT1936HMS#TRA1PBF	LT1936 / LT1936IMS#TRA1PBF	LT1945 / LT1945EMS#PBF	LT1945 / LT1945EMS#TRA1PBF
LT1945 / LT1945EMS#TRMPBF	LT1945 / LT1945EMS#TRPBF	LT1945 / LT1945IMS#PBF	LT1945 / LT1945IMS#TRA1PBF	LT1945 / LT1945IMS#TRMPBF
LT1945 / LT1945IMS#TRPBF	LT1961 / LT1961IMS#TRA1PBF	LT1962 / LT1962EMS-3.3#PBF	LT1962 / LT1962EMS-3.3#TRMPBF	LT1962 / LT1962EMS-3.3#TRPBF
LT1962 / LT1962IMS#TRA1PBF	LT1965 / LT1965EMS#2JPPBF	LT1991 / LT1991IMS#PBF	LT1991 / LT1991IMS#TRA1PBF	LT1991 / LT1991IMS#TRPBF
LT3010 / LT3010EMS#PBF	LT3010 / LT3010EMS#TRMPBF	LT3010 / LT3010EMS#TRPBF	LT3010 / LT3010EMS-5#PBF	LT3010 / LT3010EMS-5#TRA1PBF
LT3010 / LT3010EMS-5#TRMPBF	LT3010 / LT3010EMS-5#TRPBF	LT3010 / LT3010HMS#3ZZPBF	LT3010 / LT3010HMS#PBF	LT3010 / LT3010HMS#TRMPBF
LT3010 / LT3010HMS#TRPBF	LT3010 / LT3010HMS-5#PBF	LT3010 / LT3010HMS-5#TRA1PBF	LT3010 / LT3010HMS-5#TRMPBF	LT3010 / LT3010HMS-5#TRPBF
LT3063 / LT3063IMS#3ZZPBF	LT3480 / LT3480EMSE#PBF	LT3480 / LT3480EMSE#TRMPBF	LT3480 / LT3480EMSE#TRPBF	LT3480 / LT3480IMS#PBF
LT3480 / LT3480IMS#TRMPBF	LT3480 / LT3480IMS#TRPBF	LT3481 / LT3481EMSE#PBF	LT3481 / LT3481EMSE#TRMPBF	LT3481 / LT3481EMSE#TRPBF
LT3481 / LT3481IMS#TRA1PBF	LT3502 / LT3502AEMS#PBF	LT3502 / LT3502AEMS#TRMPBF	LT3502 / LT3502AEMS#TRPBF	LT3505 / LT3505EMS#PBF
LT3505 / LT3505EMS#TRPBF	LT3580 / LT3580EMS#PBF	LT3580 / LT3580EMS#TRMPBF	LT3580 / LT3580EMS#TRPBF	LT3580 / LT3580IMS#3ZZPBF
LT3580 / LT3580IMS#PBF	LT3580 / LT3580IMS#TRA1PBF	LT3580 / LT3580IMS#TRMPBF	LT3580 / LT3580IMS#TRPBF	LT3684 / LT3684EMSE#PBF
LT3684 / LT3684EMSE#TRMPBF	LT3684 / LT3684EMSE#TRPBF	LT3684 / LT3684IMS#PBF	LT3684 / LT3684IMS#TRA1PBF	LT3684 / LT3684IMS#TRMPBF
LT3684 / LT3684IMS#TRPBF	LT3685 / LT3685EMSE#2KUPBF	LT3685 / LT3685EMSE#PBF	LT3685 / LT3685EMSE#TRMPBF	LT3685 / LT3685EMSE#TRPBF
LT3685 / LT3685IMS#3GCPBF	LT3685 / LT3685IMS#PBF	LT3685 / LT3685IMS#TRMPBF	LT3685 / LT3685IMS#TRPBF	LT3755 / LT3755EMSE#PBF
LT3755 / LT3755EMSE#TRPBF	LT3755 / LT3755EMSE#WPBF	LT3755 / LT3755EMSE#WTRPBF	LT3755 / LT3755HMS-2#WPBF	LT3755 / LT3755HMS-2#WTRPBF
LT3756 / LT3756HMS-2#PBF	LT3756 / LT3756HMS-2#TRPBF	LT3756 / LT3756HMS-2#WPBF	LT3756 / LT3756HMS-2#WTRPBF	LT3798 / LT3798IMS#2KUPBF
LT3798 / LT3798IMS#PBF	LT3798 / LT3798IMS#TRMPBF	LT3798 / LT3798IMS#TRPBF	LT3971 / LT3971IMS#2KCPBF	LT3971 / LT3971IMS#3GKPBFB
LT3971 / LT3971IMS#3ZZPBF	LT3971 / LT3971IMS#PBF	LT3971 / LT3971IMS#TRA1PBF	LT3971 / LT3971IMS#TRMPBF	LT3971 / LT3971IMS#TRPBF
LT3971 / LT3971IMS-5#PBF	LT3971 / LT3971IMS-5#TRPBF	LT3972 / LT3972EMSE#PBF	LT3972 / LT3972EMSE#TRMPBF	LT3972 / LT3972EMSE#TRPBF
LT3972 / LT3972IMS#PBF	LT3972 / LT3972IMS#TRPBF	LT3973 / LT3973HMS#2JTPBF	LT3973 / LT3973HMS#TRA1PBF	LT3973 / LT3973IMS#PBF
LT3973 / LT3973IMS#TRA1PBF	LT3973 / LT3973IMS#TRPBF	LT3991 / LT3991IMS#TRA1PBF	LT3991 / LT3991IMS-5#TRA1PBF	LT6118 / LT6118IMS#2GVPBF
LT6119-1 / LT6119HMS-1#3ZZPBF	LT8608 / LT8608HMS-5#3LJPBF	LT8609 / LT8609HMS#WPBF	LT8609 / LT8609HMS#WTRPBF	LT8609 / LT8609IMS#PBF
LT8609 / LT8609IMS#TRMPBF	LT8609 / LT8609IMS#TRPBF	LT8610 / LT8610HMS#3ZZPBF	LT8610 / LT8610HMS#PBF	LT8610 / LT8610HMS#TRPBF
LT8610 / LT8610HMS#WPBF	LT8610 / LT8610HMS#WTRPBF	LT8610 / LT8610IMS#3ZZPBF	LT8610 / LT8610IMS#PBF	LT8610 / LT8610IMS#TRMPBF
LT8610 / LT8610IMS#TRPBF	LT8610A / LT8610AEMSE#PBF	LT8610A / LT8610AEMSE#TRMPBF	LT8610A / LT8610AEMSE#TRPBF	LT8610A / LT8610AEMSE#2KUPBF
LT8610A / LT8610AHMS#3ZZPBF	LT8610A / LT8610AHMS#TRA1PBF	LT8610A / LT8610AHMS#WPBF	LT8610A / LT8610AHMS#WTRPBF	LT8610A / LT8610AIMS#TRA1PBF
LT8610AC / LT8610ACEMSE#PBF	LT8610AC / LT8610ACEMSE#TRPBF	LT8610AC / LT8610ACHMS#WPBF	LT8610AC / LT8610ACHMS#WTRPBF	LTC1726 / LTC1726EMS-2.5#30555PBF
LTC1733 / LTC1733EMSE#PBF	LTC1733 / LTC1733EMSE#TRMPBF	LTC1733 / LTC1733EMSE#TRPBF	LTC1861 / LTC1861HMS#2KUPBF	LTC1861 / LTC1861HMS#PBF
LTC1861 / LTC1861HMS#TRMPBF	LTC1861 / LTC1861HMS#TRPBF	LTC1861 / LTC1861IMS#PBF	LTC1861 / LTC1861IMS#TRA1PBF	LTC1861 / LTC1861IMS#TRMPBF
LTC1861 / LTC1861IMS#TRPBF	LTC1871 / LTC1871EMS#30540PBF	LTC1871 / LTC1871HMS#3HSPBF	LTC1871 / LTC1871HMS#PBF	LTC1871 / LTC1871HMS#TRMPBF
LTC1871 / LTC1871HMS#TRPBF	LTC1871 / LTC1871IMS#3CFPBF	LTC1871 / LTC1871IMS#TRA1PBF	LTC1871-1 / LTC1871IMS-1#TRA1PBF	LTC1966 / LTC1966HMS#TRA1PBF
LTC1966 / LTC1966IMS#2DAPBF	LTC2051 / LTC2051HMS#3ZZPBF	LTC2053 / LTC2053CMS#30495PBF	LTC2053 / LTC2053IMS#30549PBF	LTC2055 / LTC2055HMS#3ZZPBF
LTC2055 / LTC2055HMS#3ZZTRPBF	LTC2858 / LTC2858IMS-2#PBF	LTC2858 / LTC2858IMS-2#TRPBF	LTC2941 / LTC2941IMS#PBF	LTC2941 / LTC2941IMS#TRPBF
LTC3407-2 / LTC3407EMSE-2#3CHPBF	LTC3407-2 / LTC3407EMSE-2#PBF	LTC3407-2 / LTC3407EMSE-2#TRMPBF	LTC3407-2 / LTC3407EMSE-2#TRPBF	LTC3407A-2 / LTC3407AEMSE-2#2KUPBF
LTC3407A-2 / LTC3407AEMSE-2#PBF	LTC3407A-2 / LTC3407AEMSE-2#TRPBF	LTC3407A-2 / LTC3407AIMSE-2#TRA1PBF	LTC3411 / LTC3411EMS#3AOPBF	LTC3411 / LTC3411IMS#2JZPBF
LTC3601 / LTC3601IMS#PBF	LTC3601 / LTC3601IMS#TRPBF	LTC3704 / LTC3704EMS#2BMPBF	LTC3786 / LTC3786HMS#TRA1PBF	LTC3786 / LTC3786IMS#3ZZPBF
LTC3786 / LTC3786IMS#PBF	LTC3786 / LTC3786IMS#TRPBF	LTC3805 / LTC3805EMSE#PBF	LTC3805 / LTC3805EMSE#TRMPBF	LTC3805 / LTC3805EMSE#TRPBF
LTC3805-5 / LTC3805HMS-5#TRA1PBF	LTC3805-5 / LTC3805IMS-5#PBF	LTC3805-5 / LTC3805IMS-5#TRA1PBF	LTC3805-5 / LTC3805IMS-5#TRMPBF	LTC3805-5 / LTC3805IMS-5#TRPBF
LTC3864 / LTC3864EMSE#PBF	LTC3864 / LTC3864EMSE#TRPBF	LTC3864 / LTC3864IMS#3ZZPBF	LTC4150 / LTC4150IMS#3ZZPBF	LTC4211 / LTC4211CMS#2KKPBF
LTC4211 / LTC4211CMS#2KMPBF	LTC4231 / LTC4231HMS-1#3ZZPBF	LTC4231 / LTC4231HMS-1#WPBF	LTC4231 / LTC4231HMS-1#WTRPBF	LTC4231 / LTC4231HMS-2#WPBF
LTC4231 / LTC4231HMS-2#WTRPBF	LTC4231 / LTC4231IMS-1#WPBF	LTC4231 / LTC4231IMS-1#WTRPBF	LTC4231 / LTC4231IMS-2#WPBF	LTC4231 / LTC4231IMS-2#WTRPBF
LTC4307-1 / LTC4307IMS-1#3ZZPBF	LTC4307-1 / LTC4307IMS-1#TRA1PBF	LTC4359 / LTC4359HMS#3KDPBF	LTC4359 / LTC4359HMS#3ZZPBF	LTC4359 / LTC4359HMS#WPBF
LTC4359 / LTC4359HMS#WTRPBF	LTC4359 / LTC4359IMS#3MKPBF	LTC4359 / LTC4359IMS#3ZZPBF	LTC4380 / LTC4380HMS-1#WPBF	LTC4380 / LTC4380HMS-1#WTRPBF
LTC4380 / LTC4380HMS-2#WPBF	LTC4380 / LTC4380HMS-2#WTRPBF	LTC4380 / LTC4380HMS-3#WPBF	LTC4380 / LTC4380HMS-3#WTRPBF	LTC4380 / LTC4380HMS-4#3ZZPBF
LTC4380 / LTC4380HMS-4#WPBF	LTC4380 / LTC4380HMS-4#WTRPBF	LTC4380 / LTC4380IMS-1#WPBF	LTC4380 / LTC4380IMS-1#WTRPBF	LTC4380 / LTC4380IMS-3#WPBF

LTC4380 / LTC4380IMS-3#WTRPBF	LTC4380 / LTC4380IMS-4#WPBF	LTC4380 / LTC4380IMS-4#WTRPBF	LTC4444 / LTC4444HMS8E#3ZZPBF	LTC7001 / LTC7001HMSE#WPBF
LTC7001 / LTC7001HMSE#WTRPBF	LTC7001 / LTC7001IMSE#3ZZPBF	LTC7001 / LTC7001IMSE#WPBF	LTC7001 / LTC7001IMSE#WTRPBF	LTC7001 / LTC7001JMSE#WPBF
LTC7001 / LTC7001JMSE#WTRPBF				

Appendix B - Revision History			
Rev	Publish Date	Effectivity Date	Rev Description
Rev. -	12-Jul-2022	14-Oct-2022	Initial Release

Analog Devices, Inc.

DocId:8942 Parent DocId:8931 Layout Rev:8

**Automotive Qualification Results Summary of MSOP Package
at UTAC Thailand (UT3)**

QUALIFICATION RESULTS			
TEST	SPECIFICATION	SAMPLE SIZE	RESULTS
Solder Heat Resistance (SHR)*	JEDEC/IPC <i>J-STD-020</i>	30*11	Pass
Autoclave (AC)*	JEDEC <i>JESD22-A102</i>	16*77	Pass
Unbiased Highly Accelerated Stress Test (UHAST)	JEDEC <i>JESD22-A118</i>	16*77	Pass
Highly Accelerated Stress Test (HAST)	JEDEC <i>JESD22-A110</i>	27*77	Pass
Temperature Cycle (TC)*	JEDEC <i>JESD22-A104</i>	33*77	Pass
Wire Bond Shear	AEC <i>Q100-001</i>	2*5	Pass
Post Temperature Cycle Wire Bond Pull	MIL-STD883 <i>Method 2011</i>	5*5	Pass
High Temperature Storage Life (HTSL)	JEDEC <i>JESD22-A103</i>	17*45	Pass
High Temperature Operating Life (HTOL)	JEDEC <i>JESD22-A108</i>	10*77	Pass
Early Life Failure Rate (ELFR)	AEC <i>Q100-008</i>	9*800	Pass

* These samples were subjected to preconditioning (per J-STD-020 Level 1) prior to the start of the stress test. Level 1 preconditioning consists of the following: 1. Bake – 24 hours at 125°C; 2. Soak – unbiased soak for 168 hours at 85°C, 85%RH; 3. Reflow – three passes through a reflow oven with a peak temperature of 260°C. TC samples were subjected to wire-pull test after 500 cycles with results within specification limits.