



Product/Process Change Notice - PCN 23_0102 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:	Alternate Test Site for Products Using The 349-Ball CSP_BGA Package.
Publication Date:	07-Nov-2023
Effectivity Date:	09-Feb-2024 <i>(the earliest date that a customer could expect to receive changed material)</i>
Revision Description:	Initial Release

Description Of Change:

Analog Devices will be utilizing UTAC Singapore as an alternate test site for select products in the 349-ball CSP_BGA package.

Reason For Change:

Adding capacity to ensure continuity of supply in order to meet customer demand.

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

There are no changes to fit, form, functionality or reliability.

Summary of Supporting Information:

Test correlation and validation has been performed per ADI's standard product site to site and/or platform change correlation procedure. See attached Qualification Report.

Supporting Documents

Attachment 1: Type: Delta Qualification Matrix

[ADI_PCN_23_0102_Rev - Delta-Qualification-Matrix-ZVEI-5_0_16.xlsm...](#)

Attachment 2: Type: Test Correlation Report

[ADI_PCN_23_0102_Rev - ADSP-2158x_SC58x_349-Ball_CSP_BGA_Test_Correlati...](#)

Note: If applicable, the device material declaration will be updated due to material change.

ADI Contact Information:

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

Americas:	Europe:	Japan:	Rest of Asia:
PCN_Americas@analog.com	PCN_Europe@analog.com	PCN_Japan@analog.com	PCN_ROA@analog.com

Appendix A - Affected ADI Models:

Added Parts On This Revision - Product Family / Model Number (62)

ADSP-21583 / AD91214Z	ADSP-21583 / ADSP-21583BBCZ-4A	ADSP-21583 / ADSP-21583CBCZ-4A	ADSP-21583 / ADSP-21583KBCZ-4A	ADSP-21583W-10 / AD21583WCBCZ4A10
ADSP-21583W-10 / ADW95149Z-10RL	ADSP-21584 / AD91208Z	ADSP-21584 / AD91220Z	ADSP-21584 / ADSP-21584BBCZ-4A	ADSP-21584 / ADSP-21584BBCZ-5A
ADSP-21584 / ADSP-21584CBCZ-4A	ADSP-21584 / ADSP-21584CBCZ-5A	ADSP-21584 / ADSP-21584KBCZ-4A	ADSP-21584 / ADSP-21584KBCZ-5A	ADSP-21584-D / AD91219Z
ADSP-21584-D / ADSP- 21584KBCZ4AD4	ADSP-21584-D / ADSP- 21584KBCZ5AD1	ADSP-21584-D / ADSP-21584KBCZ5AD3	ADSP-21584W-10 / AD21584WCBCZ4A10	ADSP-21584W-10 / AD21584WCBCZ5A10
ADSP-21584W-10 / ADW95159Z-10	ADSP-21584W-10 / ADW95159Z-10RL	ADSP-21584W-12 / AD21584WCBCZ4A12	ADSP-21584W-12 / ADW95159Z-12RL	ADSP-21584W-13 / ADW95167Z-13
ADSP-21584W-13 / ADW95167Z-13RL	ADSP-SC582 / ADSP-SC582BBCZ-4A	ADSP-SC582 / ADSP-SC582CBCZ-4A	ADSP-SC582 / ADSP-SC582KBCZ-4A	ADSP-SC582W-10 / ADSC582WCBCZ4A10
ADSP-SC583 / ADSP-SC583BBCZ-3A	ADSP-SC583 / ADSP-SC583BBCZ-4A	ADSP-SC583 / ADSP-SC583CBCZ-3A	ADSP-SC583 / ADSP-SC583CBCZ-4A	ADSP-SC583 / ADSP-SC583KBCZ-3A
ADSP-SC583 / ADSP-SC583KBCZ-4A	ADSP-SC583W-10 / ADSC583WCBCZ3A10	ADSP-SC583W-10 / ADSC583WCBCZ4A10	ADSP-SC584 / ADSP-SC584BBCZ-3A	ADSP-SC584 / ADSP-SC584BBCZ-4A
ADSP-SC584 / ADSP-SC584BBCZ-5A	ADSP-SC584 / ADSP-SC584CBCZ-3A	ADSP-SC584 / ADSP-SC584CBCZ-4A	ADSP-SC584 / ADSP-SC584CBCZ-5A	ADSP-SC584 / ADSP-SC584KBCZ-3A
ADSP-SC584 / ADSP-SC584KBCZ-4A	ADSP-SC584 / ADSP-SC584KBCZ-5A	ADSP-SC584-D / ADSP- SC584KBCZ5AD3	ADSP-SC584W-10 / ADSC584WCBCZ3A10	ADSP-SC584W-10 / ADSC584WCBCZ4A10
ADSP-SC584W-10 / ADSC584WCBCZ5A10	ADSP-SC584W-10 / ADW95148Z-10	ADSP-SC584W-10 / ADW95148Z-10RL	ADSP-SC584W-10 / ADW95174Z-10	ADSP-SC584W-10 / ADW95174Z-10RL
ADSP-SC584W-12 / ADSC584WCBCZ4A12	ADSP-SC584W-12 / ADW95148Z-12RL	ADSP-SC584W-12 / ADW95174Z-12RL	ADSP-SC584W-13 / ADW95166Z-13	ADSP-SC584W-13 / ADW95166Z-13ARL
ADSP-SC584W-13 / ADW95166Z-13RL	ADSPSC584W10-D / ADW95173Z-10RL			

Appendix B - Revision History:			
Rev	Publish Date	Effectivity Date	Rev Description
Rev. -	07-Nov-2023	09-Feb-2024	Initial Release

TEST PRODUCT QUALIFICATION REPORT

TITLE:

ADSP-2158x_SC58x 349-ball CSP_BGA

Test Second Source UTAC (Singapore) Qualification

PCN NUMBER:

23_0102

REVISION:

A

DATE:

28 October 2023

PROJECT BACKGROUND

Test correlation is carried out to qualify UTAC Singapore as an additional final test site for ADI devices to support production.

SUMMARY

All references to ADSP-2158x_SC58x in this report, apply to all 349-ball CSP_BGA ADSP-21583/4 and ADSP-SC582/3/4 products.

ADSP-2158x_SC58x is released at UTAC as 2nd source test solution.

There is no change to the form, fit, function, quality, or reliability between platforms.

This report documents the successful completion of the product test correlation requirements of ADSP-2158x_SC58x 349-ball CSP_BGA between STATS ChipPAC and UTAC sites.

Test product qualification was performed according to Analog Devices Specification

TEST AND PRODUCT INFORMATION

Device	ADSP-2158x_SC58x
Package	349-ball CSP_BGA, 19x19x1.36mm, 0.8mm pitch
Tester Platform	HP93K_7

Description and Test Results

Table 1 provides a description of the qualification tests conducted and corresponding test results for ADSP-2158x_SC58x. All the units have undergone electrical tests on both the sending and receiving sites on the same test platform. Any device that did not meet the electrical qualification requirements without further analysis and data to prove passing, the qualification would be considered failed.

Table 1. Test Product Transfer Qualification Criteria

Generic	Package	Lot Size	Sending Site	Receiving Site	Mean Shift =< 5%	Sigma Ratio =< 1.3
ADSP-2158x_SC58x	349-ball CSP_BGA, 19x19x1.36mm, 0.8mm pitch	100	SCS	UTAC	Passed	Passed

The ADSP-2158x_SC58x was qualified by running a qualification lot with 100 units both in STATS ChipPAC and UTAC.

Data between sites were analyzed as summarized in Table 1.

A passing result was recorded when the yield from receiving site met or exceeded yield from sending site as summarized in Table 2. Succeeding lots with increased quantity will be closely monitored once the device has started production at UTAC.

Table 2. Test Product Transfer Qualification Lot Run

GENERIC	Package	Lot Size	Test Site	Results
ADSP-2158x_SC58x	349-ball CSP_BGA, 19x19x1.36mm, 0.8mm pitch	100	UTAC	Passed

No valid rejects were encountered during the said evaluation in both sending and receiving sites.

Rejects Verifications

5 valid rejects tested in STATS ChipPAC and UTAC having the same result.

Table 3. Setup verification using Reject units.

Unit #	SCS	UTAC
1	Failed	Failed
2	Failed	Failed
3	Failed	Failed
4	Failed	Failed
5	Failed	Failed

ADSP-2158x SC58x 349-ball CSP BGA Initial Process Study (Test Temperature = 133 degC)

Key Datasheet Parameter	Datasheet Specs				Site (STATS-ChipPac Singapore)			Site (UTAC Singapore)				
	Min	Nom	Max	Units	Mean	Stdv	Cpk	Mean	Stdv	Cpk	GR&R (%)	NDC
SIDD			0.7	A	0.198	0.017	>7	0.224	0.022	>7	2.84676	50
IIL			10	uA	-0.024	0.002222	>10	-0.0425	0.002222	>10	0.147	1918
IIH			10	uA	0.067	0.004444	>10	0.117	0.005926	>10	0.251	1126
IOZL			10	uA	-0.009	0.001481	>10	-0.015	0.001481	>10	0.0872	3245
IOZH			10	uA	0.038	0.003704	>10	0.056	0.002222	>10	0.105	2702
VIL			0.8	V	1.41	0.003704	>10	1.41	0.003704	>10	9.096	11
VIH	2			V	1.82	0.003704	>10	1.82	0.003704	>10	2.909	61
VOL			0.4	V	0.1	0.000574	>10	0.1	0.000631	>10	0.6212	228
VOH	2.4			V	3.02	0.000574	>10	3.03	0.000573	>10	0.1277	494