

## Process Change Notification

This is to inform you that a design and/or process change will be implemented to the affected product(s) and this notification is for your information and concurrence. This change is planned to take effect in 90 calendar days from the date of this notification.

Please work with your local Taiwan Semiconductor Sales Representative to manage your inventory of unchanged product if your evaluation of this change will require more than 90 calendar days.

Please contact your local Taiwan Semiconductor Field Quality Service or Customer Quality Engineer within 45 days of receipt of this notification if you require any additional data or samples.

**PCN No:** PCN22001

**Title:** SOT23, SOT25, and DFN2x2 New Assembly and Test Site

**Issue Date:** 2022/1/12

If you have any questions concerning this change, please contact:

**PCN Coordinator**

Name : Delia Chang

E-Mail: [delia.chang@mail.ts.com.tw](mailto:delia.chang@mail.ts.com.tw)

Phone: +886-3-928-5017 Ext. 315

**PCN Originator**

Name : Jen Peralta

E-mail: [jen.peralta@mail.ts.com.tw](mailto:jen.peralta@mail.ts.com.tw)

Phone: +886-2-8913-1588 Ext. 2211

**Reliability Engineer**

Name : Rudy Bacalso

E-mail: [rudy.bacalso@mail.ts.com.tw](mailto:rudy.bacalso@mail.ts.com.tw)

Phone: +886 289-131-588 Ext 280

**PCN Type:** New Assembly and Test Supplier

**Effectivity:**

*EXPECTED 1ST DEVICE SHIPMENT DATE: 2022/4/12*

**Product Category (Description):**

All affected SOT23, SOT25, & DFN2x2 packages (part numbers listed below) supplied by Taiwan Semiconductor Co. Ltd.

**Description of Change:**

Taiwan Semiconductor is qualifying new supplier based in Taichung, Taiwan as new assembly and test location for SOT23, SOT25 & DFN2x2 packages which is previously assembled and tested in previous supplier from Hsinchu, Taiwan.

Reliability tests and electrical characterization has been completed on representative part numbers to ensure no change to device functionality or electrical specifications in the datasheet.

**Bill of Materials Comparison:**

Item	Old Supplier Code: 1258			New Supplier Code: 1253			Remarks
	DFN	SOT23	SOT25	DFN	SOT23	SOT25	
Wafer	Mosfet			Mosfet			No Change
Leadframe	Cu Alloy			Cu Alloy			No Change
Die Attach	Ag Epoxy			Ag Epoxy			No Change
Wire bond	Au Wire			Au Wire			No Change
Compound	G770	G600		G770	G600		No Change
Plating	Pure Sn			Pure Sn			No Change
Packing	Dry Pack			Non Dry Pack			New Supplier is qualified at MSL1

**Qualification/Reliability Result:**

**Qual Vehicle:** TS5204CQ33, TS5213CX550, TS78L03CX

**Package Type:** SOT23, SOT25 & DFN2x2

Stress Test Abbrev	Test Methods	Test Conditions/ Test Req't	Final Readpoint	Requirements		Schedule	
				SS	*# Lots	Rej/SS	Remarks
<b>Environmental and Lifetime Stress Tests</b>							
TEST	Product Datasheet	test at room temp	-	All	3	0 Fails	Passed
PC	JESD22-A113	MSL-1 (3x reflow at 260°C) test at 25°C	-	240	3	0/720	Passed
HAST	JESD22-A110	130°C/85% RH; V=80% VR test at 25°C	96 hrs	80	3	0/240	Passed
UHAST	JESD22-A118	130°C/85% RH; unbiased test at 25°C	96 hrs	80	3	0/240	Passed
TC	JESD22-A104	-65°C to 150°C test at 25°C	500 cys	80	3	0/240	Passed
HTSL	JESD22-A103	150°C test at 25°C	1000 hrs	80	3	0/240	Passed
HTOL	JESD22-A108	125°C; Vcc≥Vcc max test at 25°C	1000 hrs	80	3	0/240	Passed

Package Assembly Integrity Tests							
PD	JESD22-B100/108	per assembly spec	results	30	3	0/90	Passed
SD	JESD002/2-2-B102	245°C	10secs	15	3	0/45	Passed

**Effect of Change:**

There is no impact in product electrical specification, functionality, quality and reliability.

**List of Affected Devices:**

Package	Ordering Code	<a href="#">New Ordering Code</a>
DFN2X2	TS5204CQ33 RFG	No Change
SOT-23	TS78L05CX RFG	No Change
	TS78L09CX RFG	No Change
	TS78L03CX RFG	No Change
SOT-25	TS5213CX533 RFG	No Change
	TS5213CX550 RFG	No Change