**PCN Number:** 20210805000.1 August 11, 2021 **PCN Date:** Qualification of TSMC-WFT (Fab 11) as an additional Wafer Fab Site option for select Title: devices **Customer Contact: PCN Manager** Dept: **Quality Services Estimated Sample** Date provided at **Proposed 1st Ship Date:** Nov 11, 2021 **Availability:** sample request. **Change Type:** Assembly Process **Assembly Site Assembly Materials Electrical Specification** Mechanical Specification Design **Test Site** Packing/Shipping/Labeling **Test Process** Wafer Bump Site Wafer Bump Material Wafer Bump Process Wafer Fab Site Wafer Fab Materials Wafer Fab Process Part number change **PCN Details** 

### **Description of Change:**

Texas Instruments is pleased to announce the qualification of TSMC-WFT (Fab 11) fabrication facility as an additional Wafer Fab source for the selected devices listed in the "Product Affected" section.

Current Fab Site			Additional Fab Site		
Current Fab Site	Process	Wafer Diameter	New Fab Site	Process	Wafer Diameter
TSMC-WF4 (Fab 4)	0.18UM-TSMC	200 mm	TSMC-WFT (Fab 11)	0.18UM-TSMC	200 mm

A Datasheet Update (relevant to both the existing and new manufacturing site) is forthcoming related to ESD. The ESD-CDM Spec will be changed from 400V to 250V in order to align with current JEDEC and industry standards. No performance difference was shown between the existing site and the new site.

Qual details are provided in the Qual Data Section.

### **Reason for Change:**

Continuity of Supply

Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

# Changes to product identification resulting from this PCN:

#### Current

Chip Site	Chip Site Origin (20L)	Chip Site Country Code (21L)	Chip Site City
TSMC-WF4 (Fab 4)	TS3	TWN	San Jose

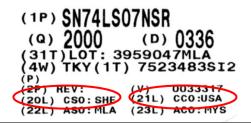
#### **New Fab Site**

Chip Site	Chip Site Origin (20L)	Chip Site Country Code (21L)	Chip Site City
TSMC-WFT (Fab 11)	T13	USA	San Jose

Sample product shipping label (not actual product label)







Product Affected:		
Froduct Affected.		
CC1101RGPR	CC1101RGPT	

# **Qualification Report**

# Approve Date 14-Jul-2021

# Qualification Results Data Displayed as: Number of lots / Total sample size / Total failed

Туре	Test Name / Condition	Duration	Qual Device: CC1101RGPR	QBS Process Reference: CC2533F96RHA
THB	Biased Temperature and Humidity, 85C/85%RH	1000 Hour	QBS	5/154/0
UHAST	Unbiased HAST 110C/85%RH	264 Hour	QBS	3/231/0
TC	Temperature Cycle, -55/125C	1000 Cyc	QBS	5/308/0
TC	Temperature Cycle, -65/150C	700 Cyc	QBS	3/77/0
HTSL	High Temp Storage Bake 150C	1000 Hour	QBS	3/231/0
HTOL	Life Test, 125C	1000 Hour	QBS	3/116/0
HBM	ESD HBM	750V	1/3/0	-
CDM	ESD CDM	250V	1/3/0	-
LU	Latch-up, High Temp	+/- 100 mA and 1.5 x Vmax @ max Tj	1/3/0	-

- QBS: Qual By Similarity
- Qual Device CC1101RGPR CLARK is qualified at LEVEL3-260CG
- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable
- The following are equivalent HTOL options based on an activation energy of 0.7eV: 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
- The following are equivalent HTSL options based on an activation energy of 0.7eV: 150C/1k Hours, and 170C/420 Hours
- The following are equivalent Temp Cycle options per JESD47: -55C/125C/700 Cycles and -65C/150C/500 Cycles

Quality and Environmental data is available at TI's external Web site: http://www.ti.com/

Green/Pb-free Status:

Qualified Pb-Free (SMT) and Green

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