

PCN Number:	20180829000.1. B		PCN Date:	Dec 13, 2018	
Title:	Qualification of TSMC-WFT as an additional Wafer Fab Site option for select devices				
Customer Contact:	PCN Manager		Dept:	Quality Services	
Proposed 1st Ship Date:	Nov 29, 2018	Estimated Sample Availability:	Date provided at sample request.		
Change Type:					
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Assembly Materials
<input type="checkbox"/>	Design	<input checked="" type="checkbox"/>	Electrical Specification	<input type="checkbox"/>	Mechanical Specification
<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process
<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>	Wafer Bump Material	<input type="checkbox"/>	Wafer Bump Process
<input checked="" type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials	<input type="checkbox"/>	Wafer Fab Process
		<input type="checkbox"/>	Part number change		

PCN Details

Description of Change:

Revision B is to announce the addition of new devices that were not included on the original PCN notification. These new devices are highlighted in **bold** in the device list below. The expected first shipment date for these new devices specifically, will be 90 days from this notice (**March 13, 2019**). The proposed 1st ship date of Nov 29, 2018 still applies for the original set of devices.

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

Current Sites			Additional Sites		
Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter
AMS	MIXEDSIG-0.35	200mm	TSMC-WFT	MIXEDSIG-0.35	200mm

In addition, the datasheet number will be changing.

Device Family	Change From:	Change To:
CC1020	SWRS046H	SWRS046I
CC1021	SWRS045E	SWRS045F

The CC1020 product datasheet is updated as seen in the change revision history below:

CC1020

SWRS046I – NOVEMBER 2006 – REVISED SEPTEMBER 2018



2 Revision History

Changes from Revision H (March 2015) to Revision I	Page
• Global: Changed upper frequency from 960 MHz to 930 MHz	<u>1</u>
• Global: Removed references to ARIB STD-T96	<u>1</u>

These changes may be viewed at: <http://www.ti.com/lit/ds/symlink/cc1020.pdf>

The CC1021 product datasheet is updated as seen in the change revision history below:



CC1021

SWRS045F – JANUARY 2006 – REVISED NOVEMBER 2018

Changes from August 20, 2016 to November 30, 2018	Page
• Global: Changed upper frequency from 960 MHz to 930 MHz	<u>1</u>
• Global: Removed references to ARIB STD-T96	<u>1</u>

These changes may be viewed at: <http://www.ti.com/product/CC1021>

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):

None

Changes to product identification resulting from this PCN:

Current

Chip Site	Chip Site Origin (20L)	Chip Site Country Code (21L)	Chip Site City
AMS	AUS	AUT	Unterpremstaetten

New Fab Site

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

Sample product shipping label (not actual product label)

TEXAS INSTRUMENTS
 MADE IN: Malaysia
 2DC: 20:
 MSL 2 /260C/1 YEAR SEAL DT
 MSL 1 /235C/UNLIM 03/29/04
 OPT: 39
 ITEM:
LBL: 5A (L)T0:1750

(1P) SN74LS07NSR
 (Q) 2000 (D) 0336
 (31T) LOT: 3959047MLA
 (4W) TKY (1T) 7523483SI2
 (P)
 (2P) REV: (Y) 0033317
 (20L) CS0: SHE (21L) CCO: USA
 (22L) AS0: MLA (23L) ACO: MYS

Product Affected Group:

CC1020LRSSR	CRF7964ARHBR	TRF7962ARHBR	TRF7964ARHBR
CC1020RSSR	TRF7960ARHBR	TRF7962ARHBT	TRF7964ARHBT
CC1020RSST	TRF7960ARHBT	TRF7963ARHBR	TRF7970ARHBR
CC1020WRSSR	TRF7960AY	TRF7963ARHBT	TRF7970ARHBT
CC1021RSSR			
CC1021RSST			

Qualification Report

CC1020 family of devices: Qualification of TSMC F11 as additional wafer fab to AMS Approved: Sept 7, 2018

Product Attributes

Attributes	Qual Device: AMS PROPRIETARY DEVICE	Qual Device: CC1020	Qual Device: CC1020 AMS DEVICE
Assembly Site	ASE	Clark/Carsem*	ASE
Package Family	LQFP	QFN	QFN
Wafer Fab Supplier	TSMC FAB11	TSMC FAB11	TSMC FAB11
Wafer Process	MIXEDSIG-0.35	MIXEDSIG-0.35	MIXEDSIG-0.35

- QBS: Qual By Similarity

*CC1020 QFN is qualified for both Clark and Carsem assembly. TSMC Qual vehicle was assembled in Clark.

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: AMS PROPRIETARY DEVICE	Qual Device: CC1020	Qual Device: CC1020
BHAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0	-	-
BHAST	Biased HAST, 110C/85%RH	264 Hours	-	1/77/0	-
ELFR	Early life Failure Rate, 125C	48 Hours	3/3000/0	-	-
TC	Temperature Cycle, -40/125C	850 Cycles	3/231/0	-	-
TC	Temperature Cycle, -55/125C	700 Cycles	-	1/77/0	-
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	3/231/0	-	-
UHAST	Unbiased HAST, 110C/85%RH	264 Hours	-	1/77/0	-
AC	Autoclave, 121C	96 Hours	-	1/77/0	-
CDM	ESD - CDM	250V	-	1/3/0	1/3/0
HBM	ESD - HBM	per datasheet: 1000V all pins except RF; 400V RF pins	-	-	1/3/0
HTOL	Life Test, 125C	1000 Hours	3/231/0	1/77/0	-
HTSL	High Temp. Storage Bake, 150C	1000 Hours	1/77/0	1/77/0	-
LU	Latch-up	(per JESD78)	-	-	1/3/0

- 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

For questions regarding this notice, e-mails can be sent to the regional contacts shown below, or you can contact your local Field Sales Representative.

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
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