



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20160720001

**Qualify ASES as an additional Assembly & Test site for select devices
Change Notification / Sample Request**

Date: 7/22/2016

To: PREMIER FARNELL PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

We request you acknowledge receipt of this notification within **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance of the change. If you require samples or additional data to support your evaluation, please request within 30 days.

The proposed first ship date is indicated on page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice, contact your local Field Sales Representative or the PCN Manager (PCN_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services

20160720001
Change Notification / Sample Request
Attachments

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
MAX3221CPW	null
MAX3221CPWE4	null
MAX3221IPW	null
MAX3221IPWG4	null
MAX3221IPWR	null
TRS3221ECPWR	null
TRS3221EIPW	null
MAX3221CPWR	null
MAX3221ECPWR	null
MAX3221EIPW	null
MAX3221EIPWR	null
TRS3221EIPWR	null
MAX3221ECPW	null

Technical details of this Product Change follow on the next page(s).

PCN Number:	20160720001		PCN Date:	07/22/2016												
Title:	Qualify ASES as an additional Assembly & Test site for select devices															
Customer Contact:	PCN Manager	Dept:	Quality Services													
Proposed 1st Ship Date:	10/22/2016	Estimated Sample Availability:	Provided upon Request													
Change Type:																
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>												
<input type="checkbox"/>	Design	<input type="checkbox"/>	Electrical Specification	<input type="checkbox"/>												
<input checked="" type="checkbox"/>	Test Site	<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>												
<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>	Wafer Bump Material	<input type="checkbox"/>												
<input type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials	<input type="checkbox"/>												
		<input type="checkbox"/>	Part number change													
PCN Details																
Description of Change:																
Texas Instruments is pleased to announce the qualification of ASES as an additional Assembly & Test site for the list of devices shown below. Material differences between sites as follows.																
<table border="1"> <thead> <tr> <th>Assembly Site</th> <th>Assembly Site Origin</th> <th>Assembly Country Code</th> <th>Assembly City</th> </tr> </thead> <tbody> <tr> <td>TI Malaysia</td> <td>MLA</td> <td>MY</td> <td>Kuala Lumpur</td> </tr> <tr> <td>ASES</td> <td>ASH</td> <td>CN</td> <td>Shanghai</td> </tr> </tbody> </table>					Assembly Site	Assembly Site Origin	Assembly Country Code	Assembly City	TI Malaysia	MLA	MY	Kuala Lumpur	ASES	ASH	CN	Shanghai
Assembly Site	Assembly Site Origin	Assembly Country Code	Assembly City													
TI Malaysia	MLA	MY	Kuala Lumpur													
ASES	ASH	CN	Shanghai													
Material Differences:																
<table border="1"> <thead> <tr> <th></th> <th>TI Malaysia</th> <th>ASES</th> </tr> </thead> <tbody> <tr> <td>Mount Compound</td> <td>4042500</td> <td>EY1000063</td> </tr> <tr> <td>Mold compound</td> <td>4206193</td> <td>EN2000507</td> </tr> <tr> <td>Lead finish</td> <td>NiPdAu</td> <td>Matte Sn</td> </tr> </tbody> </table>						TI Malaysia	ASES	Mount Compound	4042500	EY1000063	Mold compound	4206193	EN2000507	Lead finish	NiPdAu	Matte Sn
	TI Malaysia	ASES														
Mount Compound	4042500	EY1000063														
Mold compound	4206193	EN2000507														
Lead finish	NiPdAu	Matte Sn														
<p>Upon expiration of this PCN, TI will combine lead free solutions in a single <u>standard part number</u>, for example; <u>MAX3221CPWR</u> – can ship with both Matte Sn and NiPdAu. When available customers may specify NiPdAu finish by ordering the part with the G4 suffix, e.g. <u>MAX3221CPWRG4</u>.”</p> <p>Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ.</p>																
Reason for Change:																
Continuity of Supply																
Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):																
None																
Anticipated impact on Material Declaration																
<input type="checkbox"/>	No Impact to the Material Declaration	<input checked="" type="checkbox"/>	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the TI ECO website .													

Changes to product identification resulting from this PCN:

Assembly Site	Assembly Site Origin (22L)	ASO: MLA
TI Malaysia	Assembly Site Origin (22L)	ASO: ASH
ASESH	Assembly Site Origin (22L)	ASO: ASH

Sample product shipping label (not actual product label)



Topside Device marking:

Assembly site code for MLA= K

Assembly site code for ASH = A

Product Affected

MAX3221CPW	MAX3221ECPWG4	MAX3221IPW	TRS3221ECPWR-LI
MAX3221CPWE4	MAX3221ECPWR	MAX3221IPWG4	TRS3221EIPW
MAX3221CPWG4	MAX3221EIPW	MAX3221IPWR	TRS3221EIPWR
MAX3221CPWR	MAX3221EIPWE4	MAX3221IPWRG4	TRS3221EIPWRG4
MAX3221CPWRE4	MAX3221EIPWG4	TRS3221CPWR	TRS3221IPW
MAX3221CPWRG4	MAX3221EIPWR	TRS3221CPWRG4	TRS3221IPWR
MAX3221ECPW	MAX3221EIPWRE4	TRS3221ECPW	
MAX3221ECPWE4	MAX3221EIPWRG4	TRS3221ECPWR	

Qualification Report

Multisource MAX3221ECPWR and MAX3221CPWR to ASES

Approve Date 01-Jul-2016

Product Attributes

Attributes	Qual Device: MAX3221CPWR	Qual Device: MAX3221ECPWR	QBS Product Reference: TRS3243CDB	QBS Process Reference: MAX232ECDW	QBS Process Reference: MAX3237EDW
Assembly Site	ASESH	ASESH	MLA	MLA	MLA
Package Family	TSSOP	TSSOP	SSOP	SOIC	SOIC
Flammability Rating	UL 94 V0	UL 94 V0	UL 94 V0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	DFAB	DFAB	DFAB	DFAB	DFAB
Wafer Process	LBC3S	LBC3S	LBC3S	LBC3S	LBC3S

Attributes	QBS Process Reference:	QBS Package Reference:	QBS Package Reference:	QBS Package Reference:
------------	---------------------------	---------------------------	---------------------------	---------------------------

	SN75C3238EDW	SN74LV14APWR	SN74LVC14APWR	ULN2003APW
Assembly Site	TAI	ASESH	ASE-SH	ASESH
Package Family	SOIC	TSSOP	TSSOP	TSSOP
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	DFAB	SFAB	FFAB	SFAB
Wafer Process	LBC3S	EPIC1-S	P9750	JI

- QBS: Qual By Similarity
- Qual Devices qualified at LEVEL1-260CG: MAX3221CPWR, MAX3221ECPWR
- Device MAX3221ECPWR contains multiple dies.

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: MAX3221CPWR	Qual Device: MAX3221ECPWR	QBS Product Reference: TRS3243CDB	QBS Process Reference: MAX232ECDW
AC	Autoclave 121C	96 Hours	-	-	-	-
ED	Electrical Characterization	Per Datasheet Parameters	-	-	Pass	Pass
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	-
ESD	ESD - IEC Air Gap	15000 V	-	-	-	1/3/0
HBM	ESD - HBM	4000 V	1/3/0	1/3/0	-	-
HBM	ESD - HBM -HIGH	15000 V	-	-	1/3/0	1/3/0
CDM	ESD - CDM	1500 V	1/3/0	1/3/0	-	1/3/0
HTOL	Life Test, 150C	300 Hours	-	-	1/77/0	-
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	-	-	-
LU	Latch-up	(per JESD78)	1/6/0	1/6/0	1/6/0	3/9/0
TC	Temperature Cycle, -65C/150C	500 Cycles	-	-	-	-
THB	Biased Temperature and Humidity, 85C/85%RH	1000 Hours	-	-	-	-
UHA	Unbiased HAST 130C/85%RH	96 Hours	-	-	-	-
WBP	Bond Strength	Wires	-	-	-	-

Type	Test Name / Condition	Duration	QBS Process Reference: MAX3237E DW	QBS Process Reference: SN75C3238 EDW	QBS Package Reference: SN74LV14 APWR	QBS Package Reference: SN74LVC14A PWR	QBS Package Reference: ULN2003AP W
AC	Autoclave 121C	96 Hours	1/77/0	1/77/0	-	-	-
ED	Electrical Characterization	Per Datasheet Parameters	-	-	Pass	Pass	Pass
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	1/77/0	1/77/0	1/77/0
ESD	ESD - IEC Air Gap	15000 V	-	-	-	-	-
HBM	ESD - HBM	4000 V	-	-	-	-	-

HBM	ESD - HBM -HIGH	15000 V	-	-	-	-	-
CDM	ESD - CDM	1500 V	-	-	-	-	-
HTOL	Life Test, 150C	300 Hours	1/40/0	1/40/0	1/77/0	1/77/0	1/77/0
HTSL	High Temp. Storage Bake, 150C	1000 Hours	1/77/0	1/77/0	1/77/0	1/77/0	1/77/0
LU	Latch-up	(per JESD78)	-	-	-	-	-
TC	Temperature Cycle, - 65C/150C	500 Cycles	1/77/0	1/77/0	1/77/0	1/77/0	1/77/0
THB	Biased Temperature and Humidity, 85C/85%RH	1000 Hours	1/26/0	1/26/0	-	-	-
UHASt	Unbiased HAST 130C/85%RH	96 Hours	-	-	1/77/0	1/77/0	1/77/0
WBP	Bond Strength	Wires	-	-	1/76/0	1/76/0	1/76/0

- 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 your local Field Sales Representative.

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com