



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20161130002
Elimination of Tungsten at Metal One on select devices in the CS80 process
Change Notification / Sample Request

Date: November 30, 2016
To: TOKYO ELECTRON DEVICE (DSTR) 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 changes discussed within this PCN will not take effect any earlier than **90** days from the date of this notification, unless customer agreement has been reached on an earlier implementation of the change. This notification period is per TI's standard process.

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).

PCN Team
SC Business Services

20161130002
Attachment: 1

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
LMV321M5X/NOPB	null
LMV722M/NOPB	null
LMV7239M7/NOPB	null
LMV751M5/NOPB	null
LMV772MM/NOPB	null
LMV821M5/NOPB	null
LMV822MM/NOPB	null
LMV824MT/NOPB	null
LMV934MA/NOPB	null
LMV324MT/NOPB	null
LMV7239M5X/NOPB	null
LMV7271MGX/NOPB	null
LMV934MTX/NOPB	null
LMV321M7/NOPB	null
LMV324MTX/NOPB	null
LMV614MTX/NOPB	null
LMV712TLX/NOPB	null
LMV7235M7X/NOPB	null
LMV7271MG/NOPB	null
LMV821M7/NOPB	null
LMV931MFX/NOPB	null
LMV774MTX/NOPB	null
LMV321M5/NOPB	null
LMV611MGX/NOPB	null
LMV7235M5	null
LMV721M5/NOPB	null
LMP2012MAX/NOPB	null
LMV761MFX/NOPB	null
LMV771MGX/NOPB	null
LMV822MMX/NOPB	null
LMV931MF/NOPB	null
LMV821M7X/NOPB	null
LMV771MG/NOPB	null
LPV321M5/NOPB	null
LMV301MG/NOPB	null
LMV710M5/NOPB	null
LPV321M7X/NOPB	null
LMV324MX/NOPB	null
LPV358MM/NOPB	null
LMV822MX/NOPB	null
LMV772MA/NOPB	null
LMV761MF/NOPB	null
LMV824MTX/NOPB	null
LMV772MAX/NOPB	null

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

PCN Number:	20161130002			PCN Date:	Nov 30, 2016
Title:	Replacing Tungsten at Metal One with standard aluminum metallization architecture on select devices in the CS80 Fab process at Maine Fab				
Customer Contact:	PCN Manager		Dept:	Quality Services	
Proposed 1st Ship Date:	Mar 1, 2017		Estimated Sample Availability:	Date provided at sample request.	
Change Type:					
☐	Assembly Site	☐	Assembly Process	☐	Assembly Materials
☐	Design	☐	Electrical Specification	☐	Mechanical Specification
☐	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:					
This change notification is to announce the replacement of Tungsten at Metal one with standard aluminum metallization architecture on select devices in the CS80 Fab process at Maine Fab.					
Current					
Chip Site	Fab Process	Wafer Diameter	Metal One Composition		
MAINEFAB	CS80	200mm	Tungsten contact fill and metal 1		
New					
Chip Site	Fab Process	Wafer Diameter	Metal One Composition		
MAINEFAB	CS80	200mm	Tungsten contact fill plus CMP and Al/Cu 0.5% metal 1		
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:					
None					
Product Affected:					
DP83213B-MWF	LMV712LD/NOPB	LMV751M5	LMV824MX/S7002283		
LMP2012MA/NOPB	LMV712LDX/NOPB	LMV751M5/NOPB	LMV824NDGVR		
LMP2012MAX/NOPB	LMV712MM	LMV751M5X	LMV931FF-MDC		
LMP2012MM/NOPB	LMV712MM/J7002923	LMV751M5X/NOPB	LMV931MF		
LMP2012MMX/NOPB	LMV712MM/NOPB	LMV761MA	LMV931MF/NOPB		
LMV301MG/NOPB	LMV712MMX/NOPB	LMV761MA/NOPB	LMV931MFX		
LMV301MGX/NOPB	LMV712TL/NOPB	LMV761MAX/NOPB	LMV931MFX/NOPB		
LMV321M5	LMV712TLX/NOPB	LMV761MF	LMV931MG		
LMV321M5/E7002868	LMV721M5	LMV761MF/NOPB	LMV931MG/NOPB		
LMV321M5/NOPB	LMV721M5/NOPB	LMV761MFX	LMV931MGX/NOPB		
LMV321M5X/NOPB	LMV721M5X/NOPB	LMV761MFX/NOPB	LMV931WP-MDC		
LMV321M5X/S7002243	LMV721M7	LMV762-MDC	LMV934MA		
LMV321M5X/SL110546	LMV721M7/NOPB	LMV771MG	LMV934MA/NOPB		
LMV321M7	LMV721M7X/NOPB	LMV771MG/NOPB	LMV934MAX/NOPB		
LMV321M7/NOPB	LMV722M	LMV771MGX/NOPB	LMV934MT/NOPB		
LMV321M7X	LMV722M/NOPB	LMV772MA/NOPB	LMV934MTX		

LMV321M7X/J7001898	LMV722MM/J7003071	LMV772MAX/E5002752	LMV934MTX/NOPB
LMV321M7X/NOPB	LMV722MM/NOPB	LMV772MAX/E7002744	LMV981MF
LMV324M	LMV722MMX/NOPB	LMV772MAX/NOPB	LMV981MF/NOPB
LMV324M/NOPB	LMV722MX/NOPB	LMV772MM/NOPB	LMV981MFX/NOPB
LMV324MT/NOPB	LMV7235M5	LMV772MMX/NOPB	LMV981MG
LMV324MTX	LMV7235M5/NOPB	LMV774MT/NOPB	LMV981MG/NOPB
LMV324MTX/NOPB	LMV7235M5X	LMV774MTX/NOPB	LMV981MGX/NOPB
LMV324MTX/S4000043	LMV7235M5X/NOPB	LMV821M5	LMV981TL/NOPB
LMV324MX	LMV7235M7	LMV821M5/NOPB	LMV981TLX/NOPB
LMV324MX/E7002869	LMV7235M7/NOPB	LMV821M5X	LMV982MM/NOPB
LMV324MX/NOPB	LMV7235M7X/NOPB	LMV821M5X/NOPB	LMV982MMX/NOPB
LMV344MA/NOPB	LMV7239 MWC	LMV821M7	LPV321M5/NOPB
LMV344MAX/NOPB	LMV7239M5	LMV821M7/NOPB	LPV321M5X
LMV344MAX/S5000800	LMV7239M5/NOPB	LMV821M7X	LPV321M5X/NOPB
LMV344MAX/S7002582	LMV7239M5X	LMV821M7X/NOPB	LPV321M7
LMV344MT/NOPB	LMV7239M5X/NOPB	LMV822M	LPV321M7/NOPB
LMV344MTX/NOPB	LMV7239M5X/S7002756	LMV822M/NOPB	LPV321M7X/NOPB
LMV604MA/NOPB	LMV7239M7	LMV822MM	LPV324M/NOPB
LMV604MAX/NOPB	LMV7239M7/NOPB	LMV822MM/NOPB	LPV324MT/NOPB
LMV604MT/NOPB	LMV7239M7X	LMV822MMX/NOPB	LPV324MTX
LMV604MTX/NOPB	LMV7239M7X/E7002743	LMV822MX	LPV324MTX/NOPB
LMV611MF/NOPB	LMV7239M7X/NOPB	LMV822MX/NOPB	LPV324MTX/S5000955
LMV611MFX/NOPB	LMV7271MF	LMV822MX/S5002129	LPV324MX
LMV611MG/NOPB	LMV7271MF/NOPB	LMV824M	LPV324MX/NOPB
LMV611MGX/NOPB	LMV7271MFX/NOPB	LMV824M/NOPB	LPV358M/NOPB
LMV614MA/NOPB	LMV7271MG	LMV824MT/NOPB	LPV358MM
LMV614MAX/NOPB	LMV7271MG/NOPB	LMV824MTX	LPV358MM/NOPB
LMV614MT/NOPB	LMV7271MGX/NOPB	LMV824MTX/E7000973	LPV358MMX/NOPB
LMV614MTX/NOPB	LMV7272TL/NOPB	LMV824MTX/NOPB	LPV358MX
LMV710M5	LMV7272TLX/NOPB	LMV824MTX/S7001910	LPV358MX/NOPB
LMV710M5/J7002925	LMV7275MG	LMV824MX	SM73308MG/NOPB
LMV710M5/NOPB	LMV7275MG/NOPB	LMV824MX/NOPB	SM73308MGE/NOPB
LMV710M5X	LMV7275MGX/NOPB	LMV824MX/S5000461	SM73308MGX/NOPB
LMV710M5X/NOPB			

Qualification Report
CS080 AICu Back End Conversion
Approve Date 20-Oct-2016

Product Attributes

Attributes	Qual Device: LMV824Q1MT/NOPB
Assembly Site	TIEM-AT
Package Family	TSSOP
Wafer Fab Supplier	MFAB
Wafer Fab Process	CS080

- QBS: Qual By Similarity
- Qual Device LMV824Q1MT/NOPB is qualified at LEVEL1-260CG

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: LMV824Q1MT/NOPB
PC	Preconditioning Level 1	260C	3/720/0
AC	Autoclave 121C	96 Hours	3/231/0
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0
ELFR	Early Life Failure Rate, 125C	48 Hours	3/2400/1*
HTOL	Life Test, 125C	1000 Hours	3/231/0

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable

*One Continuity failure due to EOS

- 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
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com