



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

**PCN# 20200514000.1**  
**Standardization of Metallization for select CS065 devices**  
**Change Notification / Sample Request**

**Date:** May 14, 2020  
**To:** Newark/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.

Texas Instruments requires acknowledgement of 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 samples or additional data are required, requests must be received within **30 days** of this notification.

The changes discussed within this PCN will not take effect any earlier than the proposed first ship date 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 or to provide acknowledgement of this PCN, you may contact your local Field Sales Representative or the PCN Team ([PCN\\_ww\\_admin\\_team@list.ti.com](mailto:PCN_ww_admin_team@list.ti.com)). For sample requests or sample related questions, contact your local Field Sales Representative.

Sincerely,

PCN Team  
SC Business Services

**20200514000.1**  
**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.

<b>DEVICE</b>	<b>CUSTOMER PART NUMBER</b>
LM2852YMXA-3.3/NOPB	null
LM2852XMXA-1.2/NOPB	null

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

<b>PCN Number:</b>	20200514000.1			<b>PCN Date:</b>	May 14, 2020
<b>Title:</b>	Standardization of Metallization for select CS065 devices				
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>		<b>Dept:</b>	Quality Services	
<b>Proposed 1<sup>st</sup> Ship Date:</b>	Aug 14, 2020	<b>Estimated Sample Availability:</b>	Date provided at sample request.		
<b>Change Type:</b>					
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Assembly Materials
<input type="checkbox"/>	Design	<input 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 type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials	<input checked="" type="checkbox"/>	Wafer Fab Process
		<input type="checkbox"/>	Part number change		
<b>PCN Details</b>					
<b>Description of Change:</b>					
Texas Instruments Incorporated is announcing a metal layer thickness change to standardize the thickness for the CS065 technology. Affected devices are listed in the "Product Affected" of this document.					
<b>Current</b>					
<b>Chip Site</b>	<b>Fab Process</b>	<b>Wafer Diameter</b>	<b>Metal 3 Layer Thickness</b>		
MAINEFAB	CS065	200mm	2µm		
<b>New</b>					
<b>Chip Site</b>	<b>Fab Process</b>	<b>Wafer Diameter</b>	<b>Metal 3 Layer Thickness</b>		
MAINEFAB	CS065	200mm	1µm		
Qual details are provided in the Qual Data Section.					
<b>Reason for Change:</b>					
Quality Improvement					
<b>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</b>					
None					
<b>Changes to product identification resulting from this PCN:</b>					
None					
<b>Product Affected:</b>					
LM2852XMXA-1.0/NOPB	LM2852XMXAX-1.2/NOPB	LM2852YMXA-1.3/NOPB	LM2852YMXAX-1.2/NOPB		
LM2852XMXA-1.2/NOPB	LM2852XMXAX-1.5/NOPB	LM2852YMXA-1.5/NOPB	LM2852YMXAX-1.5/NOPB		
LM2852XMXA-1.5/NOPB	LM2852XMXAX-1.8/NOPB	LM2852YMXA-1.8/NOPB	LM2852YMXAX-1.8/NOPB		
LM2852XMXA-1.8/NOPB	LM2852XMXAX-2.5/NOPB	LM2852YMXA-2.5/NOPB	LM2852YMXAX-2.5/NOPB		
LM2852XMXA-2.5/NOPB	LM2852XMXAX-3.3/NOPB	LM2852YMXA-3.3	LM2852YMXAX-3.3/NOPB		
LM2852XMXA-3.0/NOPB	LM2852YMXA-1.0/NOPB	LM2852YMXA-3.3/NOPB			
LM2852XMXA-3.3/NOPB	LM2852YMXA-1.2/NOPB	LM2852YMXAX-1.0/NOPB			

**Automotive New Product Qualification Summary  
(As per AEC-Q100 and JEDEC Guidelines)**

**Approved 14-Apr-2015**

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

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: LM4128AQ1MF-4.1
<b>Test Group A – Accelerated Environment Stress Tests</b>							
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Auto Preconditioning	L1-260C	3/893/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	196 Hours	3/231/0
AC	A3	JEDEC JESD22-A102	3	77	Autoclave, 121C, 2 atm	96 Hours	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	3/231/0
TC-WBP	A4	MIL-STD883 Method 2011	1	60	Post TC Bond Pull	Wires	1/Pass
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	N/A
<b>Test Group B – Accelerated Lifetime Simulation Tests</b>							
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	3/231/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 150C	24 Hours	3/2400/0
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	-	3/231/0
<b>Test Group C – Package Assembly Integrity Tests</b>							
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear (Cpk>1.67)	Wires	1/30/0
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull (Cpk>1.67)	Wires	1/30/0
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	PB-Free	1/Pass
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	-	3/30/0
<b>Test Group D – Die Fabrication Reliability Tests</b>							
LI	C6	JEDEC JESD22-B105	1	50	Lead Integrity	-	-
EM	D1	JESD61	-	-	Electromigration	-	Completed Per Process Technology Requirements
TDDDB	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	-	Completed Per Process Technology Requirements
HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	-	Completed Per Process Technology Requirements
NBTI	D4	-	-	-	Negative Bias Temperature Instability	-	Completed Per Process Technology Requirements
SM	D5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements
<b>Test Group E – Electrical Verification Tests</b>							
HBM	E2	AEC Q100-002	1	3	ESD-HBM-Q100	2000V	1/3/0
CDM	E3	AEC Q100-011	1	3	ESD-CDM-Q100	750V,	1/3/0
LU	E4	AEC Q100-004	1	6	Latch-up	(Per AEC Q100-004)	1/6/0
ED	E5	AEC Q100-009	3	30	Auto Electrical Distributions	Cpk>1.67 Room, hot, and cold test	3/Pass

Performed for THB, Biased HAST, AC, uHAST, TC & PTC samples, as applicable.

**Ambient Operating Temperature by Automotive Grade Level:**

Grade 0 (or E): -40°C to +150°C  
 Grade 1 (or Q): -40°C to +125°C  
 Grade 2 (or T): -40°C to +105°C  
 Grade 3 (or I): -40°C to +85°C

**E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):**

Room/Hot/Cold: HTOL, ED  
 Room/Hot: THB/HAST, TC/PTC, HTSL, ELFR, ESD & LU  
 Room: AC/uHAST

**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.

<b>Location</b>	<b>E-Mail</b>
USA	<a href="mailto:PCNAmericasContact@list.ti.com">PCNAmericasContact@list.ti.com</a>
Europe	<a href="mailto:PCNEuropeContact@list.ti.com">PCNEuropeContact@list.ti.com</a>
Asia Pacific	<a href="mailto:PCNAsiaContact@list.ti.com">PCNAsiaContact@list.ti.com</a>
WW PCN Team	<a href="mailto:PCN_ww_admin_team@list.ti.com">PCN_ww_admin_team@list.ti.com</a>

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