12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20141014000
TMP401AIDGKR/T Die Revision Change
Change Notification / Sample Request

Date: 10/17/2014
To: MOUSER 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
Phone: +1(214) 480-6037
Fax: +1(214) 480-6659

20141014000
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
TMP401AIDGKR	null
TMP401AIDGKT	null
TMP401AIDGKTG4	null

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

PCN Number:	20141014000	PCN Date:	10/17/2014
Title:	TMP401AIDGKR/T Die Revision Change		
Customer Contact:	PCN Manager	Phone: +1(214)480-6037	Dept: Quality Services
Proposed 1st Ship Date:	01/17/2015	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:

Texas Instruments is pleased to announce that the family of TMP401AIDGK devices will undergo a Die Revision change and a few datasheet changes:

Current	New
Die Rev [2P]	**Die Rev [2P]**
A	**B**

Datasheet Changes:

Changes from Revision A (October 2007) to Revision B	Page
• Changed format to meet latest data sheet standards	1
• Added *Handling Rating*, *Recommended Operating Conditions*, and *Thermal Information* tables and *Feature Description*, *Device Functional Modes*, *Application and Implementation*, *Power Supply Recommendations*, *Layout*, *Device and Documentation Support*, and *Mechanical, Packaging, and Orderable Information* sections	1
• Changed V_S to V+ throughout document	1
• Changed last *Features* bullet	1
• Changed *Applications* section	1
• Changed first paragraph and first sentence of second paragraph in *Description* section	1
• Deleted Device Information Table title	4
• Changed Input and output voltage parameter name and footnote 2 in Absolute Maximum Ratings table	5
• Changed Operating temperature range maximum specification in Absolute Maximum Ratings table	5
• Changed HBM specifications in Handling Ratings table	5
•	5
• Changed test conditions for TE_{REMOTE} parameter in Electrical Characteristics table	6
• Changed Temperature Error, TE_{LOCAL} *and* TE_{REMOTE} *versus supply* parameter name	6
• Deleted SMBus Interface, *SMBus clock frequency* and *SCL falling edge to SDA valid time* parameters from Electrical Characteristics table	6
• Changed typical and maximum specifications in first two rows of Power Supply, I_Q parameter in Electrical Characteristics table	6
• Changed test conditions for third row of Power Supply, I_Q parameter in Electrical Characteristics table	6
• Added Power Supply, *UVLO* parameter to Electrical Characteristics table	6
• Changed Power Supply, *POR* parameter maximum specification in Electrical Characteristics table	6
• Changed Timing Requirements table	7
• Changed title of *Standard and Extended Temperature Measurement Range* section	12
• Changed second sentence of *High-Speed Mode* section	16
• Changed range for high-speed mode in *Serial Interface* section	17
• Changed POR value and D0 value in Consecutive alert register row of Table 3	20

- Added Figure 19 to the *Configuration Register* section 24
- Added Figure 20 to the *Resolution Register* section 24
- Added Figure 21 to the *Conversion Rate Register* section 25
- Changed Table 6 for clarity of bit settings 25
- Added Figure 22 to the *Consecutive Alert Register* section 26
- Changed *Filtering* section 29
- Changed series line resistance value in second sentence of *Series Resistance Cancellation* section 29
- Changed supply voltage in second sentence of *Power-Supply Recommendations* section 30
- Changed last sentence of *Measurement Accuracy and Thermal Considerations* section 31
- Added Figure 30 33

The datasheet number will be changing:

Device Family	Change From:	Change To:
TMP401	SBOS371A	**SBOS371B**

These changes may be reviewed at the datasheet links provided.
http://www.ti.com/general/docs/lit/getliterature.tsp?genericPartNumber=TMP401&fileType=pdf

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:

Sample product shipping label (not actual product label)

Die Rev Marking:
Current = A
New = B

Product Affected:

TMP401AIDGKR	TMP401AIDGKRG4	TMP401AIDGKT	TMP401AIDGKTG4

Qualification Report

TMP401 DMOS5 die revision
Approved 09/30/2014

Product Attributes

Attributes	Qual Device: TMP401AIDGK	QBS Product: TMP411ADGK	QBS Process: OPA300AID	QBS Package: INA170EA/A	QBS Package: INA203AIDGSR	QBS Package: TMP431ADGKR	QBS Package: TMP75AIDGKR
Assembly Site	ASESH	NSE	CRS	ASE SHANGHAI	ASE SHANGHAI	ASE SHANGHAI	ASE SHANGHAI
Package Family	VSSOP	VSSOP	SOIC	VSSOP	VSSOP	VSSOP	VSSOP
Flammability Rating	UL 94 V-0	UL94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Site	DMOS 5	DM5	DMOS5	SFAB/HFAB	HIJI	DMOS5	TSMC
Wafer Fab Process	50HPA07	50HPA07	50HPA07	634	LBCSOI	50HPA07	0.5-DPDM

- QBS: Qual By Similarity
- Qual Device TMP401AIDGK is qualified at LEVEL2-260C

Qualification Results

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

Test Name / Condition	Duration	Qual Device: TMP401AIDGK	QBS Product: TMP411ADGK	QBS Process: OPA300AID	QBS Package: INA170EA/A	QBS Package: INA203AIDGSR	QBS Package: TMP431ADGKR	QBS Package: TMP75AIDGKR
Biased HAST, 130C/85%RH	96 Hours	-	-	3/231/0	1/77/0	1/77/0	1/77/0	1/77/0
Autoclave 121C	96 Hours	-	-	3/231/0	-	-	-	-
Unbiased HAST 130C/85%RH	96 Hours	-	-	-	1/77/0	1/77/0	1/77/0	1/77/0
Temperature Cycle -65/150C	500 Cycles	-	-	3/231/0	1/77/0	1/77/0	1/77/0	1/77/0
High Temp. Storage Bake, 150C	1000 Hours	-	-	3/135/0	-	-	-	-
High Temp. Storage Bake, 170C	420 Hours	-	-	-	1/77/0	1/77/0	1/77/0	1/77/0
Life Test, 150C	300 Hours	-	-	4/464/0	1/77/0	1/73/0	1/77/0	1/77/0
Life Test, 125C	1000 Hours	-	-	-	1/77/0	-	-	-
Ball Bond Shear	Wires	-	-	1/50/0	-	-	-	-
Bond Pull	Wires	-	-	3/228/0	-	-	-	-
ESD HBM	3000 V	-	1/3/0	-	-	-	-	-
ESD CDM	1000 V	-	1/3/0	-	-	-	-	-
Latch-up	(per JESD78)	-	1/6/0	1/12/0	-	-	-	-
Electrical Characterization	Per Datasheet Parameters	1/Pass	1/Pass	Pass	Pass	Pass	Pass	Pass

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

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