

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:			
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process
<input checked="" type="checkbox"/>	Design	<input type="checkbox"/>	Assembly Materials
<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 type="checkbox"/>	Wafer Fab Process	<input type="checkbox"/>	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 <i>Handling Rating, Recommended Operating Conditions, and Thermal Information</i> tables and <i>Feature Description, Device Functional Modes, Application and Implementation, Power Supply Recommendations, Layout, Device and Documentation Support, and Mechanical, Packaging, and Orderable Information</i> sections.....	1
• Changed V _S to V+ throughout document	1
• Changed last <i>Features</i> bullet	1
• Changed <i>Applications</i> section	1
• Changed first paragraph and first sentence of second paragraph in <i>Description</i> 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 <i>Standard and Extended Temperature Measurement Range</i> section	12
• Changed second sentence of <i>High-Speed Mode</i> section	16
• Changed range for high-speed mode in <i>Serial Interface</i> 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
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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	AESH	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.

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