

PCN Number:	20200728001.1	PCN Date:	July 30, 2020
Title:	ADS7038/TLA2518 Die Revision Change and Datasheet Updates		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Oct 30, 2020	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 checked="" type="checkbox"/>	Electrical Specification
<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Packing/Shipping/Labeling
<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>	Wafer Bump Material
<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:

This notification is to inform of a design change to the ADS7038/TLA2518 device families. The design change was performed to improve the accuracy of the RMS module.

The Die Revision and the datasheet numbers will be changing:

Current			New	
Device Family	Die Revision	Datasheet Number	Die Revision	Datasheet Number
ADS7038	B	SBAS979A	C	SBAS979B
TLA2518	B	SBAS980A	C	SBAS980B

The product datasheet(s) is updated as seen in the change revision history below:



ADS7038

SBAS979B – JUNE 2019 – REVISED JUNE 2020

ADS7038 Small, 8-Channel, 12-Bit ADC with SPI Interface, GPIOs, and CRC

4 Revision History

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

Changes from Revision A (December 2019) to Revision B	Page
• Changed description of DECAP pin in <i>Pin Functions</i> table.....	4
• Added last sentence to <i>AVDD and DVDD Supply Recommendations</i> section.....	70
• Changed last sentence of <i>Layout Guidelines</i> section.....	71



TLA2518

SBAS980B – JUNE 2019 – REVISED JUNE 2020

TLA2518 Small, 8-Channel, 12-Bit ADC with SPI Interface and GPIOs

4 Revision History

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

Changes from Revision A (December 2019) to Revision B	Page
• Changed description of DECAP pin in <i>Pin Functions</i> table.....	3
• Added last sentence to <i>AVDD and DVDD Supply Recommendations</i> section.....	32
• Changed last sentence of <i>Layout Guidelines</i> section.....	33

These changes may be reviewed at the datasheet links provided:

<https://www.ti.com/lit/ds/symlink/ads7038.pdf>

<https://www.ti.com/lit/ds/symlink/tda2518.pdf>

Reason for Change:

Improved product performance

Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

None

Changes to product identification resulting from this PCN:

Die Rev designator will change as shown in the table and sample label below:

Current	New
Die Rev [2P]	Die Rev [2P]
B	C

Sample product shipping label (not actual product label)

TEXAS INSTRUMENTS
 MADE IN: Malaysia
 2DC: 2Q:
 MSL 2 / 260C / 1 YEAR SEAL DT
 MSL 1 / 235C / UNLIM 03/29/04
 OPT:
 ITEM: 39
 LBL: 5A (L)T0:1750

(1P) SN74LS07NSR
 (Q) 2000 (D) 0336
 (31T) LOT: 3959047MLA
 (4W) TKY (1T) 7523483SI2
 (P)
 (2P) REV: (V) 0033317
 (20L) CSO: SHE (21L) CCO: USA
 (22L) ASO: MLA (23L) ACO: MYS

Product Affected:

ADS7038IRTER	ADS7038IRTET	TLA2518IRTER	TLA2518IRTET
--------------	--------------	--------------	--------------

Qualification Report
Approve Date 26-May-2020

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: <u>ADS7028IRTE</u>	QBS Product Reference: <u>ADS7038IRTE</u>	QBS Process Reference: <u>DRV2605LTDGSRQ1</u>	QBS Package Reference: <u>TMP117AIDRV</u>	QBS Package Reference: <u>TPS25740BRGE</u>
HTOL	High Temp Operating Life Test, 150C	300 Hours	-	1/77/1 ^A	-	3/231/0	-
HTOL	High Temp Operating Life Test, 125C	1000 Hours	-	-	3/231/0	-	1/77/0
ELFR	Early Life Failure Rate, 105C	48 Hours	-	-	3/2400/0	-	-
HBM	ESD - HBM	2000 V	-	1/3/0	-	-	1/3/0
HBM	ESD - HBM	4000 V	-	-	-	1/3/0	1/3/0
CDM	ESD - CDM	1500 V	-	1/3/0	-	1/3/0	1/3/0
CDM	ESD - CDM - Q100	1000 Volts	-	-	1/3/0	-	-
LU	Auto Latch-up	Per AEC-Q100-004	-	-	1/6/0	-	-

Type	Test Name / Condition	Duration	Qual Device: <u>ADS7028IRTE</u>	QBS Product Reference: <u>ADS7038IRTE</u>	QBS Process Reference: <u>DRV2605LTDGSRQ1</u>	QBS Package Reference: <u>TMP117AIDRV</u>	QBS Package Reference: <u>TPS25740BRGE</u>
LU	Latch-up	Per JESD78	1/6/0	1/6/0	-	-	1/6/0
ED	Electrical Characterization	Per Datasheet Parameters	1/30/0	1/30/0	3/90/0	-	1/30/0
AC	Autoclave 121C	96 Hours	-	-	3/231/0	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	1/77/0	3/231/0	3/231/0	3/231/0
HTSL	High Temp Storage Bake 150C	1000 Hours	-	-	1/45/0	3/231/0	-
HTSL	High Temp Storage Bake 170C	420 Hours	-	1/77/0	-	-	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	-	1/77/0	3/231/0	3/231/0	3/231/0
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	1/77/0	-	3/231/0	3/231/0

- QBS: Qual By Similarity

- Qual Device ADS7028IRTE is qualified at LEVEL2-260C

^A One device was a minor parametric shift post stress. The device started out at time zero at the lower limit of the spec.

- 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 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
WW PCN Team	PCN_ww_admin_team@list.ti.com

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of

these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to TI's Terms of Sale (www.ti.com/legal/termsofsale.html) or other applicable terms available either on ti.com or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.