

<b>Notification Number:</b>	20161214001	<b>Notification Date:</b>	December 19, 2016
<b>Title:</b>	Datasheet for ADS1013-Q1/ADS1014-Q1/ADS1015-Q1		
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>	<b>Dept:</b>	Quality Services
<b>Change Type:</b>			
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design
<input type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Data Sheet
<input type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Materials
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process

### Notification Details

#### Description of Change:

Texas Instruments Incorporated is announcing an information only notification. The product datasheet(s) is updated as seen in the change revision history below: This change only applies to ADS1015AQDGSRQ and ADS1015QDGSRQ1.



#### ADS1013-Q1, ADS1014-Q1, ADS1015-Q1

SBAS511B – JULY 2010 – REVISED DECEMBER 2016

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#### Changes from Revision A (March 2016) to Revision B

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• Added ADS1014-Q1 and ADS1013-Q1 to data sheet .....	1
• Changed <i>Title</i> , and <i>Description</i> , <i>Features</i> , and <i>Applications</i> sections for clarity .....	1
• Deleted temperature range text from <i>Description</i> section and moved to <i>Features</i> section .....	1
• Changed <i>Device Comparison Table</i> .....	4
• Changed <i>Pin Functions</i> table for clarity.....	4
• Changed <i>Power-supply voltage</i> max value from 5.5 V to 7 V in <i>Absolute Maximum Ratings</i> table.....	5
• Changed <i>Analog input voltage</i> from –0.3 V to GND – 0.3 V in <i>Absolute Maximum Ratings</i> table .....	5
• Changed <i>Digital input voltage</i> min value from –0.5 V to GND – 0.3 V in <i>Absolute Maximum Ratings</i> table.....	5
• Changed <i>Digital input voltage</i> max value from 5.5 V to VDD + 0.3 V in <i>Absolute Maximum Ratings</i> table .....	5
• Deleted <i>Analog input current</i> rows in <i>Absolute Maximum Ratings</i> table.....	5
• Added <i>Input current</i> row in <i>Absolute Maximum Ratings</i> table .....	5
• Added <i>Operating temperature</i> range of –40°C to +125°C back into <i>Absolute Maximum Ratings</i> table .....	5
• Added minimum specification of –40°C for T <sub>j</sub> in <i>Absolute Maximum Ratings</i> table .....	5
• Deleted <i>Machine model</i> row from <i>ESD Ratings</i> table .....	5
• Deleted <i>Supply current</i> and <i>power dissipation</i> rows and moved to <i>Electrical Characteristics</i> table .....	5
• Changed <i>Full-scale input voltage range</i> (FSR) from typical value of ±4.096/PGA V to min value of ±0.256 V and max value of ±6.144 V for clarity in <i>Recommended Operating Conditions</i> table.....	5
• Added <i>Digital input voltage</i> (V <sub>DIG</sub> ) to <i>Recommended Operating Conditions</i> table .....	5
• Added new note 1 for <i>Recommended Operating Conditions</i> table .....	5
• Changed text in note 2 (previously note 1 in revision A) from "In no event should more than VDD + 0.3 V be applied to this device" to "No more than VDD + 0.3 V or 5.5 V (whichever is smaller) must be applied to this device. See Table 3 for more information." .....	5
• Added values for ADS111xA-Q1 devices in <i>Thermal Information</i> table.....	5
• Added values for ADS111xB-Q1 devices in <i>Thermal Information</i> table.....	5

• Changed existing thermal information values for ADS1015-Q1 ( $R_{\theta JA}$ from 175.2 to 182.7, $R_{\theta JC(top)}$ from 64 to 67.2, $R_{\theta JB}$ from 96.4 to 103.8, $\psi_{JT}$ from 8.8 to 10.2, $\psi_{JB}$ from 94.8 to 102.1) .....	5
• Changed <i>Electrical Characteristics</i> table conditions line for clarity .....	6
• Changed all instances of "FS" to "FSR" .....	6
• Deleted FSR from <i>Electrical Characteristics</i> and moved to <i>Recommended Operating Conditions</i> table .....	6
• Added values from Table 1 to <i>Differential input impedance</i> parameter in <i>Electrical Characteristics</i> .....	6
• Deleted <i>Output noise</i> parameter from <i>Electrical Characteristics</i> .....	6
• Changed <i>Offset error</i> parameter min value from empty to -3, and max value from $\pm 3$ to 3 for clarity in <i>Electrical Characteristics</i> table .....	6
• Changed $V_{IH}$ parameter max value from 5.5 V to VDD in <i>Electrical Characteristics</i> table .....	6
• Changed $V_{IL}$ parameter min value from GND - 0.5 V to GND in <i>Electrical Characteristics</i> table .....	6
• Changed <i>Input leakage current</i> parameters from two rows to one row, changed test conditions from $V_{IH} = 5.5V$ and $V_{IL} = GND$ to $GND < V_{DIG} < VDD$ , and changed min value from 10 $\mu A$ to -10 $\mu A$ in <i>Electrical Characteristics</i> table .....	6
• Added <i>Supply current</i> parameters to <i>Electrical Characteristics</i> table .....	6
• Added <i>Power dissipation</i> parameters to <i>Electrical Characteristics</i> table .....	6
• Changed text in note 1 of <i>Electrical Characteristics</i> table from "In no event should more than VDD + 0.3 V be applied to this device" to "No more than VDD + 0.3 V or 5.5 V (whichever is smaller) must be applied to this device. See Table 1 for more information." .....	6
• Added condition statement in <i>Timing Requirements: <math>t^2C</math></i> .....	7
• Added note 1 to <i>Timing Requirements</i> table .....	7
• Deleted Figure 7, <i>Noise Plot</i> .....	8
• Changed functional block diagram; deleted "Gain = 2/3, 1, 2, 4, 8, or 16" from figure .....	9
• Added <i>Functional Block Diagrams</i> for ADS1014-Q1 and ADS1013-Q1 .....	9
• Changed <i>Analog Inputs</i> section to provide LSB size information instead of PGA setting .....	11
• Changed <i>Full-Scale Input</i> section title to <i>Full-Scale Range (FSR) and LSB Size</i> , and updated section for clarity .....	12
• Added <i>Voltage Reference</i> and <i>Oscillator</i> sections .....	12
• Changed <i>Comparator</i> section title to <i>Digital Comparator</i> , and updated section for clarity .....	12
• Changed <i>Conversion Ready Pin</i> section for clarity .....	13
• Changed <i>Register Map</i> section for clarity .....	21
• Changed <i>Application Information</i> section for clarity .....	25
• Added <i>Input Protection</i> section .....	26
• Added <i>Unused Inputs and Outputs</i> section .....	26
• Changed <i>Aliasing</i> section title to <i>Analog Input Filtering</i> and updated section for clarity .....	27
• Deleted previous <i>Typical Application</i> section and added new, more detailed <i>Typical Application</i> section .....	30
• Changed <i>Power Supply Recommendations</i> section for clarity .....	34
• Changed <i>Layout</i> section for clarity .....	35

The datasheet number will be changing.

Device Family	Change From:	Change To:
ADS1013-Q1/ADS1014-Q1/ADS1015-Q1	SBAS511A	<b>SBAS511B</b>

These changes may be reviewed at the datasheet links provided.

<http://www.ti.com/lit/ds/symlink/ads1015-q1.pdf>

#### Reason for Change:

To more accurately reflect device characteristics.

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

No anticipated impact. This is a specification change announcement only. There are no changes to the actual device

#### Changes to product identification resulting from this notification:

None.

#### Product Affected:

ADS1015AQDGSRQ1	ADS1015QDGSRQ1
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For questions regarding this notice, e-mails can be sent to the regional contacts shown below or your local Field Sales Representative.

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