

# 12500 TI Boulevard, MS 8640, Dallas, Texas 75243

## Notification# 20160419000 Datasheet for ADS1246, ADS1247, ADS1248 Information Only

Date: 4/25/2016 To: Newark/Farnell PCN

Dear Customer:

This is an information-only announcement of a change to a device that is currently offered by Texas Instruments.

The changes discussed within this notification are for your information only.

Any negotiated alternative change requirements will be provided via the customer's defined process. Customers with previously negotiated, special requirements will be handled separately. Any inquiries should be directed to your local Field Sales Representative.

For questions regarding this notice, contact your local Field Sales Representative or the PCN Manager (<u>PCN ww admin team@list.ti.com</u>).

Sincerely,

PCN Team SC Business Services

## Information Only Attachments

#### **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 ADS1247IPW ADS1246IPW ADS1248IPW ADS1248IPWR

### **CUSTOMER PART NUMBER**

null null null null

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

| PCN Number: 20160419000                                                                                                                                                                                                                          |                                                                                                                                              | 000                                                            | PCN                 | Date:              | 4/25/2016        |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------------|--------------------|------------------|--|--|--|
| Title: Datasheet for ADS1246, ADS1247, ADS1248                                                                                                                                                                                                   |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| Customer Contact:                                                                                                                                                                                                                                |                                                                                                                                              |                                                                | Dept:               | Qua                | Quality Services |  |  |  |
| Change Type:                                                                                                                                                                                                                                     |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| Assembly Site                                                                                                                                                                                                                                    |                                                                                                                                              | Design                                                         | Wa                  | afer Bum           | p Site           |  |  |  |
| Assembly Process                                                                                                                                                                                                                                 |                                                                                                                                              | Data Sheet                                                     |                     |                    | p Material       |  |  |  |
| Assembly Materials                                                                                                                                                                                                                               |                                                                                                                                              | Part number change                                             |                     | Wafer Bump Process |                  |  |  |  |
| Mechanical Specification                                                                                                                                                                                                                         |                                                                                                                                              | Test Site                                                      |                     | afer Fab           | •                |  |  |  |
| Packing/Shipping/Labeling                                                                                                                                                                                                                        |                                                                                                                                              | Test Process                                                   | Wa                  | afer Fab           | Materials        |  |  |  |
|                                                                                                                                                                                                                                                  |                                                                                                                                              |                                                                | Wa                  | afer Fab           | Process          |  |  |  |
|                                                                                                                                                                                                                                                  | N                                                                                                                                            | <b>Iotification Details</b>                                    |                     |                    |                  |  |  |  |
| Description of Change:                                                                                                                                                                                                                           |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| Texas Instruments Incorp                                                                                                                                                                                                                         | orated is ann                                                                                                                                | ouncing an information c                                       | only notification   | on etc.            |                  |  |  |  |
|                                                                                                                                                                                                                                                  |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| The product datasheet(s)                                                                                                                                                                                                                         | is being upda                                                                                                                                | ated as summarized belov                                       | w.                  |                    |                  |  |  |  |
|                                                                                                                                                                                                                                                  |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| The following change histo                                                                                                                                                                                                                       | ory provides                                                                                                                                 | further details.                                               |                     |                    |                  |  |  |  |
| TEXAS                                                                                                                                                                                                                                            |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| Texas<br>Instruments                                                                                                                                                                                                                             |                                                                                                                                              |                                                                | ADS1246, A          |                    |                  |  |  |  |
|                                                                                                                                                                                                                                                  |                                                                                                                                              | SBA                                                            | AS426H – AUGUST 200 | 8-REVISED N        | 1ARCH 2016       |  |  |  |
| Changes from Revision G (Octob                                                                                                                                                                                                                   | her 2011) to Revis                                                                                                                           | sion H                                                         |                     |                    | Page             |  |  |  |
|                                                                                                                                                                                                                                                  |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
|                                                                                                                                                                                                                                                  |                                                                                                                                              | ection, Device Functional Modes, A                             |                     |                    |                  |  |  |  |
|                                                                                                                                                                                                                                                  |                                                                                                                                              | n, <i>Layout</i> section, <i>Device and Docu</i><br>on section |                     |                    |                  |  |  |  |
|                                                                                                                                                                                                                                                  | <ul> <li>Mechanical, Packaging, and Orderable Information section</li></ul>                                                                  |                                                                |                     |                    |                  |  |  |  |
| -                                                                                                                                                                                                                                                |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
|                                                                                                                                                                                                                                                  | <ul> <li>Merged all <i>Pin Functions</i> into one table, changed IOUT1 and IOUT2 to IEXC1 and IEXC2 to match figures</li></ul>               |                                                                |                     |                    |                  |  |  |  |
| <ul> <li>Changed compliance voltage for excitation current sources in <i>Electrical Characteristics</i>, now refers to Figure 41 and<br/>Figure 42; changed initial error and initial mismatch to absolute error and absolute mismatch</li></ul> |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| <ul> <li>Re-ordered elements in <i>Timing Requirements</i> tables, changed timing references to t<sub>CLK</sub></li></ul>                                                                                                                        |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| Changed order of <i>Typical Characteristics</i> curves to match order in <i>Electrical Characteristics</i> table                                                                                                                                 |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| Added cross-reference for Equation 1 in Noise Performance section                                                                                                                                                                                |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| Corrected values in Table 2                                                                                                                                                                                                                      |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| Modified Low-Noise PGA section to add more detail; added Table 7; added PGA Common-Mode Voltage                                                                                                                                                  |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| Requirements and PGA Common-Mode Voltage Calculation Example sections                                                                                                                                                                            |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| <ul> <li>Added f<sub>CLK</sub>/f<sub>MOD</sub> column to Table</li> </ul>                                                                                                                                                                        |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| Added cross-reference for Equation 15 to Power-Supply Monitor section                                                                                                                                                                            |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| Added cross-reference for Equation 16 to External Voltage Reference Monitor section                                                                                                                                                              |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| Added Device Functional Modes section                                                                                                                                                                                                            |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
| Corrected values in Table 15 to remove extra 0 in 800000h                                                                                                                                                                                        |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |
|                                                                                                                                                                                                                                                  | Added text to Chip Select section to say that SCLK will force DRDY high, even with CS high                                                   |                                                                |                     |                    |                  |  |  |  |
|                                                                                                                                                                                                                                                  | Added text to <i>Data Output and Data Ready</i> section to say that stop read data continuous mode is not compatible with DRDY MODE set to 1 |                                                                |                     |                    |                  |  |  |  |
|                                                                                                                                                                                                                                                  |                                                                                                                                              |                                                                |                     |                    |                  |  |  |  |

|     | show full command and DF                                                                                   | RDY/DOUT falling with   | NOP           |                              |            | 43                   |    |  |
|-----|------------------------------------------------------------------------------------------------------------|-------------------------|---------------|------------------------------|------------|----------------------|----|--|
| •   | Added more infomation to <i>Data Format</i> section; added Figure 77                                       |                         |               |                              |            |                      |    |  |
| •   | Added cross-reference for Figure 78 to Commands section                                                    |                         |               |                              |            |                      |    |  |
| •   | Modified Figure 78 to include CS status through SLEEP and WAKEUP command                                   |                         |               |                              |            |                      |    |  |
| •   | Updated Figure 79 and Figure 80 to show start of command execution                                         |                         |               |                              |            |                      |    |  |
| •   | Added cross-reference for Figure 83 to Commands section                                                    |                         |               |                              |            |                      |    |  |
| •   | Removed figure for SDATAC (Stop Read Data Continuous) command                                              |                         |               |                              |            |                      |    |  |
| •   | • Updated Figure 85 to show MUX1 as the start of the data byte for the given command and register location |                         |               |                              |            |                      |    |  |
| •   | Updated Figure 86 to show start of calibration timing                                                      |                         |               |                              |            |                      |    |  |
| •   | Updated Register Maps section to new format                                                                |                         |               |                              |            |                      |    |  |
| •   | Updated Application Inform                                                                                 | ation section. Included | l new typical | applications for Ratiometric | 3-Wire RT  | D                    |    |  |
|     | Measurement System and K-Type Thermocouple Measurement (-200°C to +1250°C) with Cold-Junction              |                         |               |                              |            |                      |    |  |
|     |                                                                                                            |                         |               |                              |            |                      |    |  |
| •   | Updated Figure 112 and Fi                                                                                  | -                       | -             |                              |            |                      |    |  |
| •   | Removed Hardware-Compensated 3-Wire RTD Measurement application section                                    |                         |               |                              |            |                      |    |  |
| The | datasheet number v                                                                                         | will be changing        |               |                              |            |                      |    |  |
|     | evice Family Change From:                                                                                  |                         |               |                              | Change To: |                      |    |  |
|     | ADS1246, ADS1247, ADS1248                                                                                  |                         | SBAS426G      |                              | SBAS426H   |                      |    |  |
| The | These changes may be reviewed at the datasheet links provided.                                             |                         |               |                              |            |                      |    |  |
|     | ://www.ti.com/prod                                                                                         |                         | uutusnet      |                              |            |                      |    |  |
|     |                                                                                                            |                         |               |                              |            |                      |    |  |
| Rea | ason for Change:                                                                                           |                         |               |                              |            |                      |    |  |
|     | more accurately refle                                                                                      | ect device chara        | cteristics    |                              |            |                      |    |  |
| -   |                                                                                                            |                         |               |                              |            |                      |    |  |
| An  | ticipated impact or                                                                                        | n Fit, Form, Fu         | nction, O     | Quality or Reliabil          | ity (pos   | itive / negative):   |    |  |
|     | • •                                                                                                        | This is a specific      | ation cha     | nge announcement             | only. Th   | ere are no changes t | :0 |  |
|     | actual device.                                                                                             |                         |               |                              |            |                      |    |  |
| Cha | anges to product in                                                                                        | lentification re        | esulting      | from this PCN:               |            |                      |    |  |
| Nor | ne.                                                                                                        |                         |               |                              |            |                      |    |  |
| Pro | duct Affected:                                                                                             |                         |               |                              |            |                      |    |  |
| A   | OS1246IPW                                                                                                  | ADS1246IPWR             |               | ADS1247IPW                   | AD         | S1247IPWR            |    |  |
| A   | OS1248IPW                                                                                                  | ADS1248IPWR             |               |                              |            |                      |    |  |
|     |                                                                                                            |                         |               |                              | 1          |                      |    |  |
|     |                                                                                                            |                         |               |                              |            |                      |    |  |

For questions regarding this notice, e-mails can be sent to the regional contacts shown below or 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    |