PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: N1308-01 DATE: September 20, 2013

Product Affected: 8442AYLF, 8442AYLFT
8442AYILF, 8442AYILFT

Date Effective: December 20, 2013

Contact: TSD Clock Team
E-mail: clocks@idt.com

MEANS OF DISTINGUISHING CHANGED DEVICES:
- Product Mark
- Back Mark
- Date Code
- Other

Change of Orderable Part#. Refer to Attachment I.

Samples: Contact your local sales representative for sample and datasheet requests.

DESCRIPTION AND PURPOSE OF CHANGE:

This notification is to advise our customers of a silicon die revision. The current die revision A will be changed to revision B.

IDT requests customers to use "B" revision in their newer design/projects and switch existing design/projects to "B" revision as soon as possible. Last time buy for revision A will be on 12/20/2013.

The Data Sheet parameter for Maximum I_DD will be increased from the original 155mA to 182mA and the Maximum I_DDA will be reduced from 20mA to 16mA to more accurately account for a yield enhancement at cold temperature.

RELIABILITY/QUALIFICATION SUMMARY:
Characterization tests will verify that there is no change to the performance or reliability of the product.

CUSTOMER ACKNOWLEDGMENT OF RECEIPT:
IDT records indicate that you require written notification of this change. Please use the acknowledgement below or E-Mail to grant approval or request additional information. If IDT does not receive acknowledgement within 30 days of this notice it will be assumed that this change is acceptable.
IDT reserves the right to ship either version manufactured after the process change effective date.

Customer: ____________________________ Name/Date: ____________________________
E-Mail Address: ____________________________
Title: ____________________________ Phone# /Fax# :

Approval for shipments prior to effective date.

CUSTOMER COMMENTS: ____________________________

IDT ACKNOWLEDGMENT OF RECEIPT:
RECD. BY: ____________________________ DATE: ____________________________
PRODUCT/PROCESS CHANGE NOTICE (PCN)

ATTACHMENT I - PCN # : N1308-01

PCN Type: Data Sheet & Die Revision
Data Sheet Change: Yes
Details Of Change:

This notification is to advise our customers of a silicon die revision. The current die revision A will be changed to revision B.

IDT requests customers to use "B" revision in their newer design/projects and switch existing design/projects to "B" revision as soon as possible. Last time buy for revision A will be on 12/20/2013.

Revision B has the following improvements and design enhancements/features:

1) Replaced the ripple counter, srip9bit04, with srip9bit08.

2) TEST_CLK was changed from a CIN02L translator to a sbf20m with a voltage divider on the inb input of the buffer.

3) Control logic (3102c001_configlogic01) changed to (3102c001_configlogic02).

The Data Sheet parameter for Maximum I\textsubscript{DD} will be increased from the original 155mA to 182mA and the Maximum I\textsubscript{DDA} will be reduced from 20mA to 16mA to more accurately account for a yield enhancement at cold temperature. Refer to Table 1 for details of the data sheet change.

There will be a change in ordering part number and device top mark. Refer to Table 2.

There is no change to thermal and MSL specification due to this die revision.

There is no change to device process or technology.
### Table 1: Datasheet Changes

**From:**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Test Conditions</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_{DD}$</td>
<td>Core Supply Voltage</td>
<td></td>
<td>3.135</td>
<td>3.3</td>
<td>3.465</td>
<td>V</td>
</tr>
<tr>
<td>$V_{DDA}$</td>
<td>Analog Supply Voltage</td>
<td></td>
<td>3.135</td>
<td>3.3</td>
<td>3.465</td>
<td>V</td>
</tr>
<tr>
<td>$I_{DD}$</td>
<td>Power Supply Current</td>
<td></td>
<td></td>
<td>155</td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td>$I_{DDA}$</td>
<td>Analog Supply Current</td>
<td></td>
<td></td>
<td>20</td>
<td></td>
<td>mA</td>
</tr>
</tbody>
</table>

**To:**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Test Conditions</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_{DD}$</td>
<td>Core Supply Voltage</td>
<td></td>
<td>3.135</td>
<td>3.3</td>
<td>3.465</td>
<td>V</td>
</tr>
<tr>
<td>$V_{DDA}$</td>
<td>Analog Supply Voltage</td>
<td></td>
<td>3.135</td>
<td>3.3</td>
<td>3.405</td>
<td>V</td>
</tr>
<tr>
<td>$I_{DD}$</td>
<td>Power Supply Current</td>
<td></td>
<td></td>
<td>182</td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td>$I_{DDA}$</td>
<td>Analog Supply Current</td>
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<td></td>
<td>16</td>
<td></td>
<td>mA</td>
</tr>
</tbody>
</table>

### Table 2: Ordering Part# Changes

<table>
<thead>
<tr>
<th>Old Ordering Part Number</th>
<th>New Ordering Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>8442AYLF</td>
<td>8442BYLF</td>
</tr>
<tr>
<td>8442AYLFT</td>
<td>8442BYLFT</td>
</tr>
<tr>
<td>8442AYILF</td>
<td>8442BYILF</td>
</tr>
<tr>
<td>8442AYILFT</td>
<td>8442BYILFT</td>
</tr>
</tbody>
</table>