

Product Change Notice

PCN0903 (v1.0) July 28, 2009

Overview

This notice describes the changes to the ARINC 429 Differential Line Driver Die Change for the HI-3182PSx & HI-3183PSx.

Description

The new design has been characterized against all requirements of the ARINC 429 specification and the Holt HI-3182 & HI-3183 Data Sheet. No changes are necessary to the data sheet to accommodate the new die. This change is therefore considered a Form, Fit and Function replacement for the existing Holt product.

- Die Change 3182 Rev. K , 75 x 130 mils, to 3189 Rev. F, 78 x 160 mils
- Process Technology Change from 4.0um CMOS one layer metal to 4.0um CMOS two layer metal
- Package DAP size from 110 x 140 mils to 150 x 200 mils

The 16-Lead SOIC-WB package assembly is fully qualified at the CEI, Thailand location. (See Qualification Data in Table 2) CEI, Thailand has been a qualified supplier of Holt plastic parts for over 10 years and is ISO/ TS 16949 certified.

The 4.0um CMOS 2 layer metal semiconductor process is fully qualified at DALSA, Quebec. (See Qualification Data in Table 2) Dalsa, Quebec has been a qualified supplier of Holt wafers for over 10 years is ISO/ TS 16949 certified.

There is no change to Quality or Reliability of these devices. Holt has made a thorough analysis to assure 100% compatibility with the previous die revision.

Reason

The 3182 Die has been redesigned to provide enhanced features and package options to customers and to simplify the production flow by reducing the number of revisions.

Products Affected

Table 1 summarizes the products affected by this PCN. All parts listed are affected by this change.

Table 1: Products Affected

HI-3182PSI	HI-3182PSIF	HI-3182PST	HI-3182PSTF
HI-3183PSI	HI-3183PSIF	HI-3183PST	HI-3183PSTF

Traceability

A Date Code facilitates package traceability. Parts from Table 1 can be shipped with a Date Code of 0920 or later, beginning October 28, 2009. Product from either die type can be shipped until inventory depletion.

Qualification Data

Reliability Test	Requirement	Results
		QR-8048 Rev 1.0 16L-SOICwb 3189
Device Characterization	Final Test yield analysis over -55°C and +125°C temperature extremes.	225/0
HTOL	1000 hrs @ 125°C	45/0
Latch Up	JEDEC – Class I, Level A	6/0
ESD-HBM	JEDEC -Class 2	9/0
Lightning - RTCA DO-160F Section 22	A3XXX Level 3 Waveform 3 & 4	2/0
	B3XXX Level 3 Waveform 3 & 5A	2/0
	Z3XXX Level 3 Waveform 3 & 5B	2/0
Precondition (PC)	MSL 1	11/0
PC + HAST	96 hrs	45/0
PC + Autoclave	96 hrs	45/0
PC + Temp Cycle	1000 cycles	45/0
PC + HTS	1000 hrs	45/0

Response

Note: In accordance with JESD46-C, this change is deemed accepted by the customer if no acknowledgement is received within 30 days from this notice.

No response is required. For additional information or questions, please contact:

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Additional Documentation

Below is a list of documents that are associated with this notice:

- QR-8048 Rev. 1.0 Product Qualification

Revision History

The following table shows the revision history for this document.

Date	Version	Revision Description
7/28/09	1.0	Initial Release