28 Plastic Leaded Chip Carrier (PLCC)
Lead Frame, Mold Compound & Die Attach Change

Product Change Notice PCN1007 (v1.0) October 01, 2010

Overview
This notice describes the changes to the 28 J-Lead PLCC Package for the ARINC 429 family of devices.

Description
Devices currently being assembled in the 28 J-Lead Plastic Leaded Chip Carrier (PLCC) Package assembled at CEI, Thailand will be updated with a new bill of materials (BOM). This change affects the Form only as indicated below:

- Lead frame DAP size change from 180 x 180 mil to 200 x 200 mil (HI-3182, HI-3183, & HI-8685, HI-8685-10 only)
- Mold Compound from Sumitomo EME 6600CGL to Sumitomo EME-G700LX (Form)
- Die Attach from LMIS 84-1LMISR4 to QMI-519 (Form)
- Removal of Die Coat Q14939 (Form)

The 28-Lead PLCC 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. Holt has been in production with their 28 PLCC since 1999.

This change does not affect the Fit, Function, Quality or Reliability of these devices. There is no change to the current moisture sensitivity rating levels (per JEDEC J-STD-020D) or the thermal performance. The package dimensions are the same.

Reason
This alternate assembly material set allows Holt to better support long-term customer demand for the affected products. Holt is implementing the removal of die coat change in order to be consistent with current assembly practices. Historically, die coat has been used to reduce mechanical stress between the top surface of the die and the package mold compound. With current technologies, the die surface to package mold compound interface is robust, therefore eliminating the need for the die coating. This change is fully qualified and the data is included in this PCN. Products assembled with the change continue to meet Holt's high quality and reliability requirements. By being more consistent with current assembly-fabrication practices, this change also improves the availability of supply and the overall product life.

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

Table 1: **Products Affected**

HI-3182PJI	HI-3183PJI	HI-6010J	HI-8382J	HI-8383J	HI-8685PJI	HI-8685PJI-10
HI-3182PJIF	HI-3183PJIF	HI-6010JF	HI-8382JF	HI-8383JF	HI-8685PJIF	HI-8685PJIF-10
HI-3182PJT	HI-3183PJT	HI-6010JT	HI-8382JT	HI-8383JT	HI-8685PJT	HI-8685PJT-10
HI-3182PJTF	HI-3183PJTF	HI-6010JTF	HI-8382JTF	HI-8383JTF	HI-8685PJTF	HI-8685PJTF-10
HI-3182PJM						
HI-3182PJMF						

Traceability
This change will be implemented in January 2011. Customers may receive products with this change beginning with a date-code marking of 1101 or later on the top of the package. The 1101 date-code marking indicates the earliest date that the new material may be used for any of the affected devices. Product from the previous BOM is and will remain fully qualified and will stop shipping upon inventory depletion.

Qualification Data

Table 2

Reliability Test	Requirement	Results
		QR-1030 Rev. 1.0 28 PLCC Package Qualification
Device Characterization	Final Test yield analysis over -55°C and +125°C temperature extremes.	180/0
Precondition (PC)	MSL 3 @ 245°C	22/0
PC + HAST	+130 °C 85%RH 2atm, 96 Hrs. Biased, Vccmax	45/0
PC + Autoclave	+121 °C 100%RH, 2atm, 96 Hrs. Unbiased	45/0
PC + Temp Cycle	-65°C to +150 °C, 1000 cycles	45/0
PC + HTS	Ta ≥+150°C, 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-1030 Rev. 1.0 28 PLCC Package Qualification CEI, Thailand

Revision History

The following table shows the revision history for this document.

Date	Version	Revision Description
10/01/10	1.0	Initial Release