52 & 44 Lead Quad Flat Pack (QFP) MSL Improvement

Product Change Notice PCN1006 (v1.0) October 01, 2010

Overview
This notice describes the changes to the 52 & 44 Lead Quad Flat Pack (QFP) Package for the ARINC 429, MIL-STD 1553, and LCD Display Driver family of devices.

Description
As part of Holt's efforts for continuous improvement Holt has qualified a new BOM that will improve the moisture sensitivity level (MSL) for the 52 & 44 Low-Profile Quad Flat Pack (LQFP) package assembled at CEI, Thailand.
This change affects Form and Quality as indicated below:

- Mold Compound from Sumitomo EME 6600CGL to Sumitomo EME G700LX (Form)
- Die attach from Ablestik 84-1LMISR4 to QMI 519 (Form)
- Moisture Sensitivity Level improvement rating from 3 to 1 at 260°C. (Quality)

The 52 & 44 Lead LQFP 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 52 and 44 Lead LQFP since August 2007.

This package transfer will result in an improvement to the Moisture Sensitivity Level rating of the products in Appendix A & B. The MSL one rating is due to the re-qualification required at the increased Pb+ free temperature reflow requirements of J-STD-020D.01.

There is no change to Fit, Function or Reliability of these devices.

Reason
The 52 & 44 Lead LQFP devices at CEI, Thailand are being improved to ensure guaranteed supply of QFP package configuration device products.

Products Affected
See Appendix A & B

Traceability
A Date Code facilitates package traceability. Parts from Appendix A can be shipped with a Date Code of 1052 or later, beginning Jan 01, 2011. Parts for Appendix B can be shipped with a Date Code of 1126 or later. Product from either BOM can be shipped until inventory depletion.

Qualification Data

Reliability Test	Requirement	Results
		QR-1024 Rev 1.0 52L-LQFP HI-8583
Device Characterization	Final Test yield analysis over -55°C and +125°C temperature extremes.	400/0
Precondition (PC)	MSL 1	22/0
PC + HAST	96 hrs	90/0
PC + Autoclave	96 hrs	90/0
PC + Temp Cycle	1000 cycles	90/0
PC + HTS	1000 hrs	90/0

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:

Scott Paladichuk (spaladichuk@holtic.com)
Holt Integrated Circuits, 23351 Madero, Mission Viejo, CA 92691, Tel: (949) 859-8800, Fax: (949) 859-9643

Additional Documentation

Below is a list of documents that are associated with this notice: QR-1024 Rev. 1.0

Revision History

The following table shows the revision history for this document.

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

Appendix A

HI-3582PQI	HI-3583PQM-10	HI-3582APQT-15	HI-3584APQI-15	HI-8583PQT	HI-8151PQT
HI-3582PQIF	HI-3583PQMF-10	HI-3582APQTF-15	HI-3584APQIF-15	HI-8583PQTF	HI-8010Q-11
HI-3582PQT	HI-3584PQI	HI-3582APQM-15	HI-3584APQT-15	HI-8583PQI-10	HI-8110Q-11
HI-3582PQTF	HI-3584PQIF	HI-3582APQMF-15	HI-3584APQTF-15	HI-8583PQIF-10	HI-8151Q-11
HI-3582PQM	HI-3584PQT	HI-3583APQI	HI-3584APQM-15	HI-8583PQT-10	HI-6110PQI
HI-3582PQMF	HI-3584PQTF	HI-3583APQIF	HI-3584APQMF-15	HI-8583PQTF-10	HI-6110PQIF
HI-3582PQI-10	HI-3584PQM	HI-3583APQT	HI-3598PQI	HI-8584PQI	HI-6110PQT
HI-3582PQIF-10	HI-3584PQMF	HI-3583APQTF	HI-3598PQIF	HI-8584PQIF	HI-6110PQTF
HI-3582PQT-10	HI-3584PQI-10	HI-3583APQM	HI-3598PQT	HI-8584PQT	HI-6110PQM
HI-3582PQTF-10	HI-3584PQIF-10	HI-3583APQMF	HI-3598PQTF	HI-8584PQTF	HI-6110PQMF
HI-3582PQM-10	HI-3584PQT-10	HI-3583APQI-15	HI-3598PQM	HI-8584PQI-10	HI-6121PQI
HI-3582PQMF-10	HI-3584PQTF-10	HI-3583APQIF-15	HI-3598PQMF	HI-8584PQIF-10	HI-6121PQIF
HI-3583PQI	HI-3584PQM-10	HI-3583APQT-15	HI-8582PQI	HI-8584PQT-10	HI-6121PQT
HI-3583PQIF	HI-3584PQMF-10	HI-3583APQTF-15	HI-8582PQIF	HI-8584PQTF-10	HI-6121PQTF
HI-3583PQT	HI-3582APQI	HI-3583APQM-15	HI-8582PQT	HI-8010Q	HI-6121PQM
HI-3583PQTF	HI-3582APQIF	HI-3583APQMF-15	HI-8582PQTF	HI-8010PQI	HI-6121PQMF
HI-3583PQM	HI-3582APQT	HI-3584APQI	HI-8582PQI-10	HI-8010PQT	
HI-3583PQMTF	HI-3582APQTF	HI-3584APQIF	HI-8582PQIF-10	HI-8051PQI	
HI-3583PQI-10	HI-3582APQM	HI-3584APQT	HI-8582PQT-10	HI-8051PQT	
HI-3583PQIF-10	HI-3582APQMF	HI-3584APQTF	HI-8582PQTF-10	HI-8110PQI	
HI-3583PQT-10	HI-3582APQI-15	HI-3584APQT	HI-8583PQI	HI-8110PQT	
HI-3583PQTF-10	HI-3582APQIF-15	HI-3584APQTF	HI-8583PQIF	HI-8151PQI	

Appendix B

HI-3282PQI	HI-3585PQI	HI-3588PQI	HI-8282APQI-10	HI-8448PQT-10	HI-8589PTF
HI-3282PQIF	HI-3585PQIF	HI-3588PQIF	HI-8282APQIF-10	HI-8448PQTF-10	HI-8589PQI-10
HI-3282PQT	HI-3585PQT	HI-3588PQT	HI-8282APQT-10	HI-8581PQI	HI-8589PQIF-10
HI-3282PQTF	HI-3585PQTF	HI-3588PQTF	HI-8282APQTF-10	HI-8581PQIF	HI-8589PQT-10
HI-3282PQM	HI-3585PQM	HI-3588PQM	HI-8282APQM-10	HI-8581PQT	HI-8589PQTF-10
HI-3282PQMF	HI-3585PQMF	HI-3588PQMF	HI-8282APQMF-10	HI-8581PQTF	HI-8599PQI
HI-3282PQI-10	HI-3587PQI	HI-8282APQI	HI-8448PQI	HI-8581PQI-10	HI-8599PQIF
HI-3282PQIF-10	HI-3587PQIF	HI-8282APQIF	HI-8448PQIF	HI-8581PQIF-10	HI-8599PQT
HI-3282PQT-10	HI-3587PQT	HI-8282APQT	HI-8448PQT	HI-8581PQT-10	HI-8599PTF
HI-3282PQTF-10	HI-3587PQTF	HI-8282APQTF	HI-8448PQTF	HI-8581PQTF-10	HI-8599PQI-10
HI-3282PQM-10	HI-3587PQM	HI-8282APQM	HI-8448PQI-10	HI-8589PQI	HI-8599PQIF-10
HI-3282PQMF-10	HI-3587PQMF	HI-8282APQMF	HI-8448PQIF-10	HI-8589PQIF	HI-8599PQT-10
				HI-8589PQT	HI-8599PQTF-10