



# Package Substrate Change for Chip Scale (Tape) and Lead-Free Chip Scale (Tape)

XCN05018 (v1.0.1) December 21, 2007

Process Change Notice

## Overview

The purpose of this notification is to communicate a change in the Chip Scale and lead-free Chip Scale packages.

## Description

Device families available in the Chip Scale (package code CS) and lead-free Chip Scale (package code CSG) will be manufactured with a laminate substrate at Amkor Philippines beginning in December 2005. The CS and CSG packages are currently manufactured with a flex tape substrate at Amkor Korea. This change only affects devices currently manufactured in the CS144, CSG144, CS280 and CSG280 packages.

This change was initiated because the flex tape substrate is being discontinued by Amkor. This change is backward compatible with the flex tape substrate.

## Products Affected

This change affects all speed, package, and temperature variations of the commercial (C) and industrial (I) grade devices. Automotive and Q grade devices are not affected by this process change. Affected devices and packages are included in [Table 1](#). See the [Appendix](#) for a complete list of ordering parts numbers.

Table 1: Products Affected

| Device    | Package | Speed/Temperature           |
|-----------|---------|-----------------------------|
| XC2V40    | CS144   | All speeds and grades (C/I) |
| XC2V40    | CSG144  | All speeds and grades (C/I) |
| XC2V80    | CS144   | All speeds and grades (C/I) |
| XC2V80    | CSG144  | All speeds and grades (C/I) |
| XC2V250   | CS144   | All speeds and grades (C/I) |
| XC2V250   | CSG144  | All speeds and grades (C/I) |
| XCV50     | CS144   | All speeds and grades (C/I) |
| XCV100    | CS144   | All speeds and grades (C/I) |
| XCV50E    | CS144   | All speeds and grades (C/I) |
| XCV100E   | CS144   | All speeds and grades (C/I) |
| XCV200E   | CS144   | All speeds and grades (C/I) |
| XC2S30    | CS144   | All speeds and grades (C/I) |
| XC2S30    | CSG144  | All speeds and grades (C/I) |
| XC95144XL | CS144   | All speeds and grades (C/I) |
| XC95144XL | CSG144  | All speeds and grades (C/I) |
| XC95288XL | CS280   | All speeds and grades (C/I) |
| XC95288XL | CSG280  | All speeds and grades (C/I) |

Table 1: Products Affected (Continued)

| Device    | Package | Speed/Temperature           |
|-----------|---------|-----------------------------|
| XC95144XV | CS144   | All speeds and grades (C/I) |
| XC95288XV | CS280   | All speeds and grades (C/I) |
| XC95288XV | CSG280  | All speeds and grades (C/I) |
| XCR3128XL | CS144   | All speeds and grades (C/I) |
| XCR3128XL | CSG144  | All speeds and grades (C/I) |
| XCR3256XL | CS280   | All speeds and grades (C/I) |
| XCR3256XL | CSG280  | All speeds and grades (C/I) |

## Key Dates and Ordering

During the 90-day PCN period, standard product orders will be fulfilled with the flex package; laminate package can be ordered with an SCD ordering code (SCD0997). To use SCD0997, append "0997" to the end of the standard ordering part number (e.g., XC95144XL-7CS144C**0997**).

After the 90-day PCN period, standard product orders will be fulfilled with either the flex package or laminate package; SCD0997 will be discontinued. Xilinx will continue to cross ship devices in either flex tape package or laminate package, until flex tape inventory is depleted.

The four-digit SCD number (0997) will not be top-marked on the devices.

Table 2: Key Dates

| Time Period                        | Flex Package                                            | Laminate Package       |
|------------------------------------|---------------------------------------------------------|------------------------|
| Prior to December 12, 2005         | Standard ordering code                                  | Not available          |
| December 12, 2005 - March 12, 2006 | Standard ordering code                                  | SCD0997 ordering code  |
| After March 12, 2006               | Standard ordering code<br>(until inventory is depleted) | Standard ordering code |

## Traceability

The substrate material can be identified by the assembly site code on the package top mark. The assembly site is indicated by the first letter on line 3 of the package top mark. An “A” indicates flex tape (Amkor Korea), while an “F” indicates laminate (Amkor Philippines). [Figure 1](#) illustrates the package top mark.



Figure 1: Package Top Mark Showing Assembly Site Code

## Qualification Data

Qualification data associated with this change is available in *Qualification Data for Laminate Substrate Packages* (RPT039): [http://www.xilinx.com/support/documentation/customer\\_notices/rpt039.pdf](http://www.xilinx.com/support/documentation/customer_notices/rpt039.pdf).

Package drawings are available at:

[http://www.xilinx.com/support/documentation/package\\_specifications.htm](http://www.xilinx.com/support/documentation/package_specifications.htm)

## Response

No response is required. For additional information or questions, please contact [Xilinx Technical Support](#).

## Appendix

Following is a complete list of ordering part numbers affected by this change.

|                  |                     |                     |
|------------------|---------------------|---------------------|
| XC2V40-4CS144C   | XCV50E-6CS144C      | XCR3128XL-10CS144C  |
| XC2V40-4CS144I   | XCV50E-6CS144I      | XCR3128XL-10CS144I  |
| XC2V40-5CS144C   | XCV50E-7CS144C      | XCR3128XL-6CS144C   |
| XC2V40-5CS144I   | XCV50E-7CS144I      | XCR3128XL-7CS144C   |
| XC2V40-6CS144C   | XCV50E-8CS144C      | XCR3128XL-7CS144I   |
| XC2V40-4CSG144C  |                     | XCR3128XL-10CSG144C |
| XC2V40-4CSG144I  | XC95144XL-10CS144C  | XCR3128XL-10CSG144I |
| XC2V40-5CSG144C  | XC95144XL-10CS144I  | XCR3128XL-6CSG144C  |
| XC2V40-5CSG144I  | XC95144XL-5CS144C   | XCR3128XL-7CSG144C  |
| XC2V40-6CSG144C  | XC95144XL-7CS144C   | XCR3128XL-7CSG144I  |
|                  | XC95144XL-7CS144I   |                     |
| XC2V80-4CS144C   | XC95144XL-10CSG144C | XCR3256XL-10CS280C  |
| XC2V80-4CS144I   | XC95144XL-10CSG144I | XCR3256XL-10CS280I  |
| XC2V80-5CS144C   | XC95144XL-5CSG144C  | XCR3256XL-12CS280C  |
| XC2V80-5CS144I   | XC95144XL-7CSG144C  | XCR3256XL-12CS280I  |
| XC2V80-6CS144C   | XC95144XL-7CSG144I  | XCR3256XL-7CS280C   |
| XC2V80-4CSG144C  |                     | XCR3256XL-10CSG280C |
| XC2V80-4CSG144I  | XC95288XL-10CS280C  | XCR3256XL-10CSG280I |
| XC2V80-5CSG144C  | XC95288XL-10CS280I  | XCR3256XL-12CSG280C |
| XC2V80-5CSG144I  | XC95288XL-6CS280C   | XCR3256XL-12CSG280I |
| XC2V80-6CSG144C  | XC95288XL-7CS280C   | XCR3256XL-7CSG280C  |
|                  | XC95288XL-7CS280I   |                     |
| XC2V250-4CS144C  | XC95288XL-10CSG280C | XCV100E-6CS144C     |
| XC2V250-4CS144I  | XC95288XL-10CSG280I | XCV100E-6CS144I     |
| XC2V250-5CS144C  | XC95288XL-6CSG280C  | XCV100E-7CS144C     |
| XC2V250-5CS144I  | XC95288XL-7CSG280C  | XCV100E-7CS144I     |
| XC2V250-6CS144C  | XC95288XL-7CSG280I  | XCV100E-8CS144C     |
| XC2V250-4CSG144C |                     |                     |
| XC2V250-4CSG144I | XC95144XV-5CS144C   | XCV200E-6CS144C     |
| XC2V250-5CSG144C | XC95144XV-7CS144C   | XCV200E-6CS144I     |
| XC2V250-5CSG144I | XC95144XV-7CS144I   | XCV200E-7CS144C     |
| XC2V250-6CSG144C |                     | XCV200E-7CS144I     |
|                  | XC95288XV-10CS280C  | XCV200E-8CS144C     |
|                  | XC95288XV-10CS280I  |                     |
| XCV50-4CS144C    | XC95288XV-6CS280C   | XC2S30-5CS144C      |
| XCV50-4CS144I    | XC95288XV-7CS280C   | XC2S30-5CS144I      |
| XCV50-5CS144C    | XC95288XV-7CS280I   | XC2S30-6CS144C      |
| XCV50-5CS144I    | XC95288XV-7CS280I   | XC2S30-6CS144I      |
| XCV50-6CS144C    | XC95288XV-10CSG280C | XC2S30-5CSG144C     |
|                  | XC95288XV-10CSG280I | XC2S30-5CSG144I     |
| XC95100-4CS144C  | XC95288XV-6CSG280C  | XC2S30-6CSG144C     |
| XC95100-4CS144I  | XC95288XV-7CSG280C  |                     |
| XC95100-5CS144C  | XC95288XV-7CSG280I  |                     |
| XC95100-5CS144I  |                     |                     |
| XC95100-6CS144C  |                     |                     |

## Revision History

The following table shows the revision history for this document.

| Date     | Version | Revision                                                                                                                                                                                                                                                 |
|----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12/12/05 | 1.0     | Initial release.                                                                                                                                                                                                                                         |
| 12/21/07 | 1.0.1   | Minor editorial changes: Removed "form, fit, function" statement in the <a href="#">Description</a> section to coincide with message of this notice.<br>Updated hyperlinks to RPT036 and Package Drawings in <a href="#">Qualification Data</a> section. |