



Revision 0: Initial Release

PROCESS CHANGE NOTIFICATION PCN0701

EPCS16SI16N Process Change

Change Description

Altera's EPCS16SI16N Serial Configuration Device will be transitioned to a 0.11-micron process from the current 0.15-micron process. The functionality and AC/DC parameters described in the Serial Configuration Devices Data Sheet chapter of the Altera® Configuration Handbook will remain unchanged.

The device qualification data is in Appendix 1 of this document. The device characterization data is available upon request.

Reason for Change

The change is being made to ensure long-term customer support by increasing production capacity and reducing lead times.

Products Affected

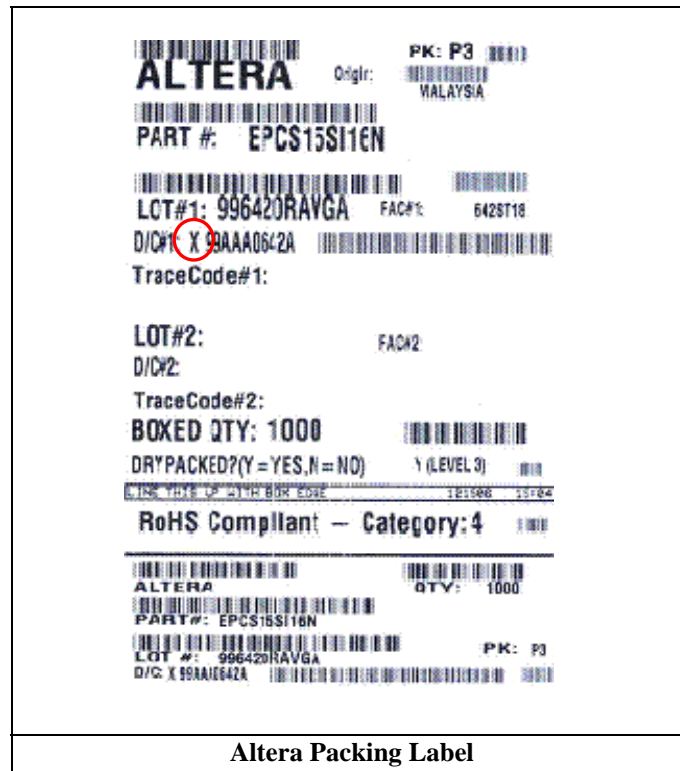
EPCS16SI16N

Product Traceability and Transition Date

Altera will begin the transition to the 0.11-micron process for EPCS16SI16N devices on April 16, 2007. After this date, customers may receive devices from either the 0.15-micron, or 0.11-micron processes.

The EPCS16SI16N devices with 0.11-micron process will be identifiable from the barcode label on the shipping boxes as shown in Figure 1. For 0.11-micron process devices, the numeral 4 will appear in the date code field, instead of the letter X shown circled in red in Figure 1.

Figure 1. Shipping Box Barcode Label



| Process | Date Code Prefix |
|--------------------|------------------|
| 0.15 μm | X |
| 0.11 μm | 4 |

Contacts

For more information on this process change notification, please contact Altera Customer Quality support at customer-quality@altera.com.

In accordance with JESD46-B, this change is deemed acceptable to the customer if no acknowledgement is received within 30 days from this notification.

Revision History

| Rev | Date Released | Description of Change |
|-----|---------------|-----------------------|
| 0 | 12-Jan-07 | Initial Release |

Appendix 1 – EPCS16SI16N Qualification Data (Page 1 of 2)

| Sub-group | Test Procedure | Method | Test Conditions | Lot 1 | Lot 2 | Lot 3 |
|-----------|---------------------------------|-------------------------|--|--------------------|--------------------|--------------------|
| 1 | High Temperature Operating Life | JEDEC-JESD22 A108 | 150°C, 4.2V – 504 hrs – 1,008 hrs | 0/80 0/80 | 0/80 0/80 | 0/80 0/80 |
| 2 | Low Temperature Operating Life | Mil Std 883 Method 1005 | –40°C, 4.2V – 504 hrs – 1,008 hrs | 0/80 0/80 | — | — |
| 3 | High Temperature Bake | JEDEC-JESD22 A103 | 200°C – 504 hrs – 1,008 hrs | 0/80 0/80 | 0/80 0/80 | 0/80 0/80 |
| 4 | Erase/Write Cycles and Bake | Internal | 10,000 E/W cycles + Bake 200°C, 48 hrs | 0/80 | 0/80 | 0/80 |
| 5 | Electrostatic Discharge | JEDEC-JESD22-A114 | Human body model: 1.5k Ω , 100pF Machine Model: 0K Ω , 200pF | > 2,000V > 200V | > 2,000V > 200V | > 2,000V > 200V |
| 6 | Latch-Up | Jedec EIA/JESD78 | at 150°C, Class A, Level II | Pass | Pass | Pass |

Appendix 1 – EPCS16SI16N Qualification Data (Page 2 of 2)

| Sub-group | Test Procedure | Method | Test Conditions | Lot 1 |
|-----------|---------------------------------|------------------------|--|--|
| 1 | Preconditioning | AEC - Q100 - J-STD-020 | Level 3 | 0/345 |
| 2 | High Temperature Bake | AEC - Q100 - JA 103 | 150°C – 504 hrs – 1,008 hrs | 0/80 ⁽¹⁾ 0/80 ⁽¹⁾ |
| 3 | Temperature Cycling | AEC - Q100 - JA 104 | –65 / +150°C – 500 cycles – 1,000 cycles | 0/80 0/80 |
| 4 | Pressure Pot | AEC - Q100 - JA 102 | 121°C, 2Atm, 100%RH – 96 hrs – 168 hrs | 0/80 0/80 |
| 5 | Thermal Shocks | Jedec-A106B | –55 / +125°C 200 shocks | 0/25 |
| 6 | Temperature and Humidity Biased | AEC - Q100 - JA 101 | 85°C, 85%RH, 3.6V – 504 hrs – 1,008 hrs | 0/80 0/80 |
| 7 | Electrostatic Discharge | AEC - Q100 - 011 | Charge Device Model (Field Induced Charge CDM) | — |

1. Results not available at this time.