



Integrated Device Technology, Inc.
2975 Stender Way, Santa Clara, CA - 95054

PRODUCT/PROCESS CHANGE NOTICE (PCN)

| | |
|---|---|
| <p>PCN #: F0001-01 DATE: January 21, 2000 Product Affected: 72v2114Z Product Family: FIFO 72v2101, 72v2111, 72v295, 72v2105, 72v263, 72v273, 72v283, 72v293, 72v2103, 72v2113, 72v3640, 72v3650 72v3660, 72v3670, 72v3680, 72v3690, 72v36100, 72v36110 Manufacturing Location Affected: Hillsboro, OR (Fab 4) Date Effective: April 21, 2000</p> | <p>MEANS OF DISTINGUISHING CHANGED DEVICES:</p> <p><input checked="" type="checkbox"/> Product Mark <input type="checkbox"/> Back Mark <input type="checkbox"/> Date Code <input type="checkbox"/> Other</p> |
|---|---|

| | |
|---|--|
| <p>Contact: Dash Patel Title: Product Assurance Manager Phone #: 408-330-1488 Fax #: 408-330-1450 E-mail: dasharath.patel@idt.com</p> | <p>Additional Data: Electrical parameters are unchanged Samples: Available upon request</p> |
|---|--|

DESCRIPTION AND PURPOSE OF CHANGE:

Die Technology
 Wafer Fabrication Process
 Assembly Process
 Equipment Minor mask change to improve manufacturing efficiency.
 Material Change in stepping from 72v2114Z to 72v2114Y
 Testing
 Manufacturing Site
 Data Sheet

RELIABILITY/QUALIFICATION SUMMARY:
 Qualification and reliability data will be available upon request.

CUSTOMER ACKNOWLEDGMENT OF RECEIPT:
 IDT records indicate that you require written notification of this change. Please use the acknowledgement below or e-mail to to grant approval or request additional information. If IDT does not receive acknowledgement within 30 days of this notice, it will be assumed that this change is acceptable.

Customer: _____ **Approval for shipments prior to effective date.**
 Name/Date: _____ E-Mail Address: _____
 Title: _____ Phone# /Fax# : _____

CUSTOMER COMMENTS: _____

RECD. BY: _____ DATE: _____

ATTACHMENT - I

PCN Summary Upgrade from stepping Z to stepping Y

PCN Type: Mask Change

Commodity FIFO

Due Date 5/1/00

Forecast or Execute Execute

Planned or Unplanned Planned

Data Sheet Change No Change

Detail of Change Change stepping from 72v2114Z to 72v2114Y

| Stepping | Z | Y |
|-----------------------------|---|-----------------|
| Technology | CEMOS - 8 | CEMOS - 8 |
| # Meta Layers | 2 | |
| # Poly Layers | 4 | |
| Wafer Type | pprime | |
| Epitaxial Layer | none | S A M E |
| Crystal orientation | 100 +/- 1 degree per SEMI STD | |
| Contact size | 0.5 um | |
| Metal Via Size | 0.6 um | A S |
| Passivation | 8000A Nitride | |
| Metal 1 Composition | 300A Ti; 1200A PVD TiN 100A CVD TiN; 4200A Al; 500A TiN | "Z" |
| Metal 1 thickness/space | 6300 A | |
| Minimum Metal 1 width/space | 0.6/0.6 um | |
| Metal 2 Composition | 300A Ti; 1000A PVD TiN 9500A Al; 340A TiN | S T E P P I N G |
| Metal 2 thickness | 11140 A | |
| Minimum Metal 2 width/space | 0.7/0.9 um | |
| Gate Material | 140 A gate oxide 2500 A poly | |
| Minimum Gate Length | 0.55 um | |

Conversion Schedule (Estimated)

| | <u>Sample Availability</u> | <u>Production Shipments</u> |
|----------|-----------------------------------|------------------------------------|
| 72v2114Y | 5/1/00 | 5/1/00 |

ATTACHMENT - II

Qualification Plan QFI-99-06

Test Vehicle: 72v2114Y

Expected Completion Date: 5/1/00

| | Qualification requirements | Expected Completion |
|------------------------------------|-----------------------------------|----------------------------|
| | Samples / # fails | Date |
| Operating Dynamic Life test | 77/0 | 5/1/00 |
| 1000 hours @ 135C. Vcc = 4.0 Volts | | |
| | | |
| ESD Human Body Model | 12 / 0 | 5/1/00 |
| ESD Charge device Model | 12 / 0 | 5/1/00 |
| | | |
| Latch-UP | 10 / 0 | 5/1/00 |
| (tested to 1.5 X Vcc) | | |
| Temperature Cycling | 45 / 0 | 5/1/00 |
| Electrical Characterization | 10 | 5/1/00 |

Characterization Data:

The Y die step meets the current data sheet