



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

## PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: SR-0201-01                      DATE: 2/8/02  
 Product Affected: 4M PDSRAM 71V576 Family - refer to  
    attached list of part numbers.  
 Manufacturing Location Affected: N/A  
 Date Effective: May 9, 2002

**MEANS OF DISTINGUISHING CHANGED DEVICES:**

- Product Mark
- Back Mark
- Date Code                      "Y" Character in Top Mark
- Other

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Attachment:  Yes                       No  
 Samples: Available upon request.

**DESCRIPTION AND PURPOSE OF CHANGE:**

- Die Technology                      This change is to upgrade the technology from CMOS 10 (.28µm) to CMOS 11.5 (.18µm) and allow for expanded product offerings. Refer to details on pages 2 and 4.
- Wafer Fabrication Process
- Assembly Process
- Equipment
- Material
- Testing
- Manufacturing Site
- Data Sheet
- Other

**RELIABILITY/QUALIFICATION SUMMARY:**

Qualification testing will verify that there is no change to the product reliability. Qualification details are 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 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.  
 IDT reserves the right to ship either version manufactured after the process change effective date until the inventory on the earlier version has been depleted.

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

**CUSTOMER COMMENTS:** \_\_\_\_\_

**IDT ACKNOWLEDGMENT OF RECEIPT:**

RECD. BY: \_\_\_\_\_ DATE: \_\_\_\_\_

## ATTACHMENT - PCN #: SR-0201-01

**PCN Summary**

**PCN Type:** Mask/Design Change for Die Shrink

**Commodity** Memory

**Forecast or Execute** Execute

**Planned or Unplanned** Planned

**Data Sheet Change** No Change

**Detail of Change** IDT's 4Mb PBSRAM Family is migrating from Cmos 10 to technology to Cmos 11.5 technology.

	Current Die Revision	Future Die Revision
Die Revision	Z step	Y Step
Wafer Fab Technology	Cmos 10	Cmos 11.5
# Poly Layers	3	1
# Metal Layers	2	3
Minimum Feature Size	0.28 $\mu$ m	0.18 $\mu$ m
Die Deminsions (sq mils)	93.7k	62.1k

**Conversion schedule (Estimated)**

	Sample Availability Beginning	Production Shipments Beginning
<i>Earliest Sample Date</i>	<i>5/9/02</i>	<i>Earliest Production Date: 8/7/02</i>
IDT71V3576	5/9/2002	8/7/02
IDT71V2576	5/9/2002	8/7/02
IDT71V3577	5/9/2002	8/7/02
IDT71V2577	5/9/2002	8/7/02
IDT71V3578	6/10/2002	9/9/02
IDT71V2578	6/10/2002	9/9/02
IDT71V3579	6/10/2002	9/9/02
IDT71V2579	6/10/2002	9/9/02
IDT71V35761	6/10/2002	9/9/02
IDT71V25761	6/10/2002	9/9/02
IDT71V35781	7/10/2002	10/8/2002
IDT71V25781	7/10/2002	10/8/2002

*Please contact your local field sales representative for sample availability and production shipments. Actual dates may vary based on the specific device option requested.*

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## Qualification Plan

Test Vehicle	Expected Completion Date		
	4/28/2002	5/28/2002	
<b>71V576Y</b>	Required Sample / # Fails	LOT #1	LOT #2
Operating Life Test: Dynamic @+135°C, Vcc=4V for 750 hours	116 / 0		
Bake & Ballshear Test @ 200°C / 4 ball bonds per device	5 / 0		
Temperature Cycling: ( -65°C to +150°C, 500 cycles)	45 / 0		
HAST: (Biased, 100 Hrs. @+130°C, +85%RH, 3 Atm.)	45 / 0		
Autoclave:(Unbiased, 2 Atm Saturated Steam, +121°C, 168 Hrs)	45 / 0		
ESD Human Body Model	9 / 0		
ESD Charged Device Model	6 / 0		
Latch up: ( Tested to 2X Vcc)	10 / 0		

Tests are completed for unshaded areas. Product release is based on qualification of initial lot.

**Characterization Data:** Characterization will be completed as part of product qualification and data available upon request. Charterization will verify that there is no change to existing datasheet parameters.

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## Product Details:

### 71V576Z Family of Parts (Pipelined 133-150Mhz and Flow-Through options)

Part Number	Old Rev	New Rev	Type	Speed	Configuration	I/O Voltage
IDT71V3576	Z	Y	PBSRAM Pipelined	133 - 150MHz	128K x 36	3.3V
IDT71V2576	Z	Y	PBSRAM Pipelined	133 - 150MHz	128K x 36	2.5V
IDT71V3577	Z	Y	PBSRAM Flow-Through	7.5 - 8.5 ns	128K x 36	3.3V
IDT71V2577	Z	Y	PBSRAM Flow-Through	7.5 - 8.5 ns	128K x 36	2.5V
IDT71V3578	Z	Y	PBSRAM Pipelined	133 - 150MHz	256K x 18	3.3V
IDT71V2578	Z	Y	PBSRAM Pipelined	133 - 150MHz	256K x 18	2.5V
IDT71V3579	Z	Y	PBSRAM Flow-Through	7.5 - 8.5 ns	256K x 18	3.3V
IDT71V2579	Z	Y	PBSRAM Flow-Through	7.5 - 8.5 ns	256K x 18	2.5V

### 71V576Z Family of Parts (Pipelined 166-200Mhz options)

Part Number	Old Rev	New Rev	Type	Speed	Configuration	I/O Voltage
IDT71V35761	Z	Y	PBSRAM Pipelined	166 - 200MHz	128K x 36	3.3V
IDT71V25761	Z	Y	PBSRAM Pipelined	166 - 200MHz	128K x 36	2.5V
IDT71V35781	Z	Y	PBSRAM Pipelined	166 - 200MHz	256K x 18	3.3V
IDT71V25781	Z	Y	PBSRAM Pipelined	166 - 200MHz	256K x 18	2.5V