



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

PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: **L-0302-04** DATE: 2/18/03
Product Affected: TVSOP 80 package type (DF80)
74ALVCHS162830DF &
74ALVCH162830DF
Date Effective: February 18, 2003

MEANS OF DISTINGUISHING CHANGED DEVICES:

- ☐ Product Mark
☐ Back Mark
☒ Date Code 0304 and thereafter
☐ Other

Contact: Bimla Paul
Title: Quality Assurance Manager
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Attachment: ☒ Yes ☐ No

Samples: Available upon request.

DESCRIPTION AND PURPOSE OF CHANGE:

- ☐ Die Technology
☐ Wafer Fabrication Process Moisture sensitivity level change from level 3 (Moisture Sensitive) to level 1 (Non-Moisture Sensitive).
☐ Assembly Process
☐ Equipment
☐ Material
☐ Testing
☐ Manufacturing Site
☐ Data Sheet
☒ Other

RELIABILITY/QUALIFICATION SUMMARY:

Please see attached Qualification data.

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: _____



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PCN Type: Moisture Level Change

Data Sheet Change: None

Detail of Change: The new assembly material set (implemented per PCN # A-0210-05 issued on 11/4/02) provides better moisture characteristics on 80-pin TVSOP. As a result, moisture sensitivity level has changed from level 3 (Moisture Sensitive) to level 1 (Non-moisture Sensitive).

Qualification Data: Test vehicle: 74ALVCHS162830

	Required Sample/ # Fails	Qual Test Results Sample/ # Fails
Steam Pressure Pot Test (SPP): Unbiased,saturated steam, 2 Atm., 121°C + End point electrical test.	45/0	45/0
Bake & Ballshear Test (@ 200°C / 4 ball bonds per device)	5/0	5/0
Bond Pull Test	3/0	3/0
Temperature Cycling: (-65°C to +150°C, 500 cycles)	45/0	45/0
HAST: (Biased, 100 Hrs. @ +130°C, +85%RH)	45/0	45/0
X-ray (Package voids, die attach voids and wire sweep)	45/0	45/0
External visual inspection	25/0	25/0
Internal visual inspection	5/0	5/0
Moisture classification (Level 1)	45/0 (2 lots)	90/0

Moisture Characterization: See page 2.



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Subject Plastic Package Moisture Sensitivity Classification, Level 1

Test Vehicle

Package DF80
Device Type/Step 74ALVCHS162830

Moisture Classification Flow and Results

Sequence	Rej	SS	Other results
Pre-Electrical Test @ 25°C (optional)	0	90	
Pre-External Visual, 40X mag - for package crack	0	90	
Pre-S.A.M. (90 units serialized)	0	90	
Temperature Cycle, 10 cyc, -65°C to 150°C	0	90	
High Temperature Bake, 24 hrs @125°C	0	90	
Dry Weight, 90 units in grams	0	90	21.7551
Moisture Exposure: Level 1, 85°C/85%RH for 168 hrs	0	90	
Wet Weight, 90 units in grams	0	90	21.7918
Moisture Gain, (Wet Wt - Dry Wt) / Dry Wt x 100%	-	-	0.1687
Solder Reflow Simulation: Convection Reflow = 260°C peak for 10-20sec, 3 cyc	0	90	
Post External Visual, 40X mag - for package crack	0	90	
Post Electrical Test @ 25°C (optional)	0	90	
Post S.A.M. (90 units serialized)	0	90	

Final Results

Moisture Classification
Equivalent JEDEC Level, J-STD-020

= Passed Level 1 (260°C Reflow)
= Level 1