



Integrated Device Technology, Inc.  
6024 Silver Creek Valley Road, San Jose, CA 95138

## PRODUCT/PROCESS CHANGE NOTICE (PCN)

<b>PCN #:</b> A0902-03 <b>Product Affected:</b> 9 mm x 9 mm VFQFPN-64  <b>Date Effective:</b> 23-May-2009	<b>DATE:</b> 23-Feb-2009	<b>MEANS OF DISTINGUISHING CHANGED DEVICES:</b> <input type="checkbox"/> Product Mark <input type="checkbox"/> Back Mark <input checked="" type="checkbox"/> Date Code      Date code 0920 onwards <input type="checkbox"/> Other
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<b>Contact:</b> Bimla Paul <b>Title:</b> Product Quality Assurance <b>Phone #:</b> (408) 574-6419 <b>Fax #:</b> (408) 284-8362 <b>E-mail:</b> <a href="mailto:Bimla.Paul@idt.com">Bimla.Paul@idt.com</a>	<b>Attachment:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <b>Samples:</b> Available on request
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**DESCRIPTION AND PURPOSE OF CHANGE:**

<input type="checkbox"/> Die Technology <input type="checkbox"/> Wafer Fabrication Process <input type="checkbox"/> Assembly Process <input type="checkbox"/> Equipment <input checked="" type="checkbox"/> Material <input type="checkbox"/> Testing <input type="checkbox"/> Manufacturing Site <input type="checkbox"/> Data Sheet <input type="checkbox"/> Other	<p>This notification is to advise our customers that IDT plans to convert VFQFN 64 package to a smaller exposed pad size. The new exposed pad dimensions are 6.15 mm x 6.15 mm compared to current 7.15 mm x 7.15 mm dimensions. This change is applicable to both "saw" and "punch" versions of the package at existing qualified assembly sub-cons.</p> <p>The data sheet will be revised to include the new package drawing.</p> <p>Attachment I - Details of change          Attachment II - Part# list          Attachment III - Package drawing</p>
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**RELIABILITY/QUALIFICATION SUMMARY:**  
 There is no change to the product quality and performance.

**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: _____	<input type="checkbox"/> <i>Approval for shipments prior to effective date.</i>
Name/Date: _____	E-Mail Address: _____
Title: _____	Phone # /Fax #: _____

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

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**IDT ACKNOWLEDGMENT OF RECEIPT:**

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



## PRODUCT/PROCESS CHANGE NOTICE (PCN)

### ATTACHMENT I - PCN #: A0902-03

**PCN Type:** Assembly Material Change

**Data Sheet Change:** Yes. Data sheet will be revised to include the new package drawing. Please see attachment III for package drawing.

**Detail of Change:** This notification is to advise our customers that IDT plans to convert the VFQFN 64 package to a smaller exposed pad size. The new exposed pad dimensions are 6.15 mm x 6.15 mm compared to current 7.15 mm x 7.15 mm dimensions. This change is applicable to both "saw" and "punch" versions of the package at existing qualified assembly sub-cons.

There is no change required to the board land pattern layout as a result of this change.

There is no change to the moisture performance or RoHS compliance.

This change will be implemented in May 2009 and the cut off date code is 0920. IDT will continue to ship product build with older exposed pad size until all the inventory has been depleted. However, there will be no mixing of old and new exposed pad size in a tray bundle or tape and reel.

The current and new exposed pad dimensions are as follows:

Description	Current	New
Exposed Pad Dimensions	7.15 mm x 7.15 mm (+ 0.10 / - 0.15mm)	6.15 mm x 6.15 mm (+/- 0.15mm)
Package Drawing	PSC-4147, Revision 03	PSC-4147, Revision 04 (See Attachment III)

#### Qualification Test Plans and Results:

Qual Vehicle: 9mm x 9mm VFQFPN-64 ( 1 lot )

Test Description	Test Method	Test Results (SS / Rej)
* High Accelerated Stress Test (Unbiased, 130 °C/85% RH, 96 Hrs)	JESD22-A118	22/0
* Temperature Cycle (-65 °C to +150 °C, 1000 Cyc)	JESD22-A104	22/0
* Steam Pressure Pot (121°C, 100% RH, 2 ATM, 168 hours)	JESD22-A102	22/0
High Temp. Storage (150 °C, 1000 Hrs)	JESD22-A103	22/0

Note: \* Test require moisture pre-conditioning sequence per JEDEC J-STD-020

**Sample Availability:** Please contact your local IDT sales representative for sample availability and additional information, if needed.



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## PRODUCT/PROCESS CHANGE NOTICE (PCN)

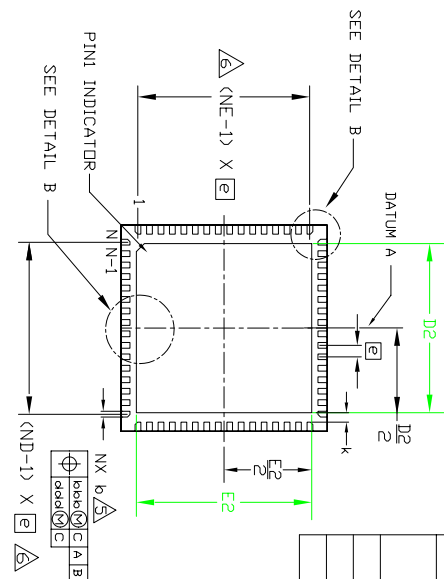
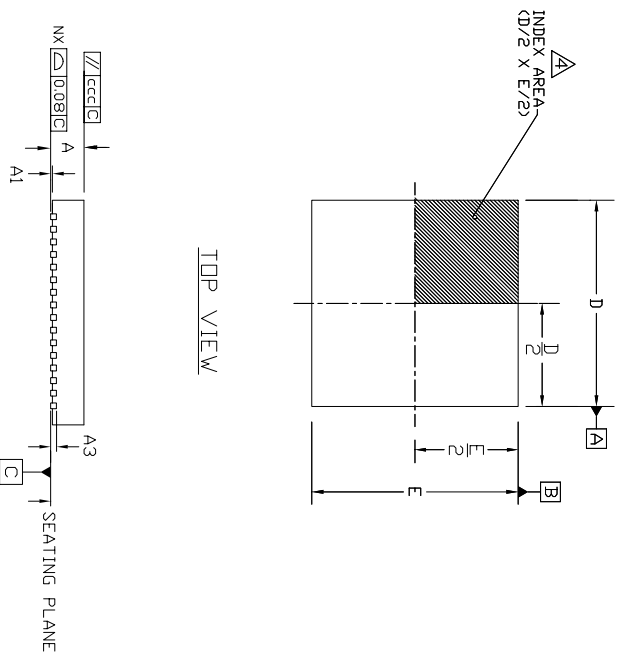
### ATTACHMENT II - PCN #: A0902-03

#### Affected Part Number

Part Number	Part Number	Part Number	Part Number
ICS954309BKLF	ICS9LPR800CKLFT	ICS9LPRS471CKLF	ICS9LPRS528CKLFT
ICS954309BKLFT	ICS9LPR802BKLF	ICS9LPRS471CKLFT	ICS9LRS3165AKLF
ICS9LPR309AKLF	ICS9LPR802BKLFT	ICS9LPRS472BKLF	ICS9LRS3165AKLFT
ICS9LPR309AKLFT	ICS9LPRS228CKLF	ICS9LPRS472BKLFT	ICS9LRS3165BKLF
ICS9LPR309BKLF	ICS9LPRS228CKLFT	ICS9LPRS477BKLF	ICS9LRS3165BKLFT
ICS9LPR309BKLFT	ICS9LPRS319DKLF	ICS9LPRS477BKLFT	ICS9LRS3166AKLF
ICS9LPR311AKLF	ICS9LPRS319DKLFT	ICS9LPRS477CKLF	ICS9LRS3166AKLFT
ICS9LPR311AKLFT	ICS9LPRS319EKLF	ICS9LPRS477CKLFT	ICS9LVRS100AKLF
ICS9LPR311BKLF	ICS9LPRS319EKLFT	ICS9LPRS480AKLF	ICS9LVRS100AKLFT
ICS9LPR311BKLFT	ICS9LPRS355BKLF	ICS9LPRS480AKLFT	ICS9LVRS100BKLF
ICS9LPR321BKLF	ICS9LPRS355BKLFT	ICS9LPRS480BKLF	ICS9LVRS100BKLFT
ICS9LPR321BKLFT	ICS9LPRS355CKLF	ICS9LPRS480BKLFT	ICS9LVRS100CKLF
ICS9LPR323AKLF	ICS9LPRS355CKLFT	ICS9LPRS501PKLF	ICS9LVRS100CKLFT
ICS9LPR323AKLFT	ICS9LPRS357AKLF	ICS9LPRS501PKLFT	ICS9LVRS129AKLF
ICS9LPR515BKLF	ICS9LPRS357AKLFT	ICS9LPRS501SKLF	ICS9LVRS129AKLFT
ICS9LPR515BKLFT	ICS9LPRS365BKLF	ICS9LPRS501SKLFT	IDTCV169CNLG
ICS9LPR515CKLF	ICS9LPRS365BKLFT	ICS9LPRS528AKLF	IDTCV169CNLG8
ICS9LPR515CKLFT	ICS9LPRS365CKLF	ICS9LPRS528AKLFT	IDTCV179CNLG
ICS9LPR800BKLF	ICS9LPRS365CKLFT	ICS9LPRS528BKLF	IDTCV179CNLG8
ICS9LPR800BKLFT	ICS9LPRS471AKLF	ICS9LPRS528BKLFT	
ICS9LPR800CKLF	ICS9LPRS471AKLFT	ICS9LPRS528CKLF	

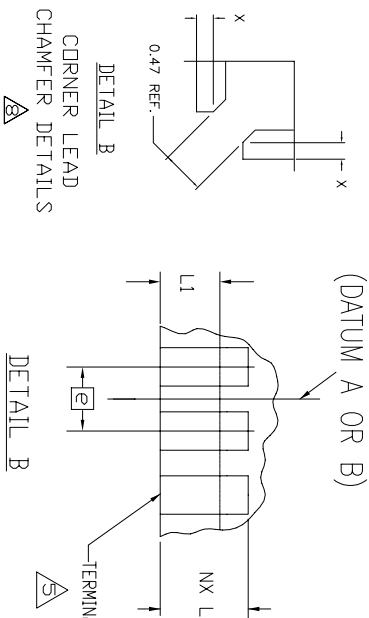
# ATTACHMENT III - PCN #:A0902-03 PACKAGE DRAWING

## OPTION 1 SAW VERSION



DIMENSIONS			
PACKAGE	64L 9.0x9.0 - 0.50		
REF.	MIN.	NDM.	MAX.
A	0.80	0.90	1.00
b	0.18	0.25	0.30
D	8.90	9.00	9.10
D2	-	-	7.80
E	8.90	9.00	9.10
e	-	-	0.50 BSC.
L	0.35	0.40	0.45
N	ND	ND	64
ND	ND	ND	16
NE	NE	NE	16
K	0.25		

DIMENSIONS			
PACKAGE	64L 9.0x9.0 - 0.50		
REF.	MIN.	NDM.	MAX.
A	0.80	0.90	1.00
b	0.18	0.25	0.30
D	8.90	9.00	9.10
D2	6.00	6.15	6.30
E	8.90	9.00	9.10
e	6.00	6.15	6.30
L	0.30	0.40	0.50
N	ND	ND	64
ND	ND	ND	16
NE	NE	NE	16
K	0.20		



COMMON DIMENSIONS			
	MIN.	NDM.	MAX.
A1	0	0.02	0.05
A3	-	0.20 REF.	-
X	b/2	-	-

TOLERANCES OF FORM AND POSITION	
bbb	0.10
ccc	0.10
ddd	0.05

- NOTES:
1. DIMENSIONING & TOLERANCING CONFORM TO ASME Y14.5M-1994.
  2. ALL DIMENSIONS ARE IN MILLIMETERS. ANGLES ARE IN DEGREES.
  3. N IS THE TOTAL NUMBER OF TERMINALS.
  4. THE TERMINAL #1 IDENTIFIER AND TERMINAL NUMBERING CONVENTION SHALL CONFORM TO JEDEC PUBLICATION 95 SPP-002. DETAILS OF TERMINAL #1 IDENTIFIER ARE OPTIONAL, BUT MUST BE LOCATED WITHIN THE ZONE INDICATED. THE TERMINAL #1 IDENTIFIER MAY BE EITHER A MOLD OR MARKED FEATURE.
  5. DIMENSION b APPLIES TO METALLIZED TERMINAL AND IS MEASURED BETWEEN 0.25mm AND 0.30mm FROM TERMINAL TIP.
  6. ND AND NE REFER TO THE NUMBER OF TERMINALS ON EACH D AND E SIDE RESPECTIVELY.
  7. DEPOPULATION IS POSSIBLE IN A SYMMETRICAL FASHION.
  8. CORNER LEAD CHAMFERS ARE APPLIED TO MAINTAIN MINIMUM CORNER LEAD SPACING (8 PLACES).

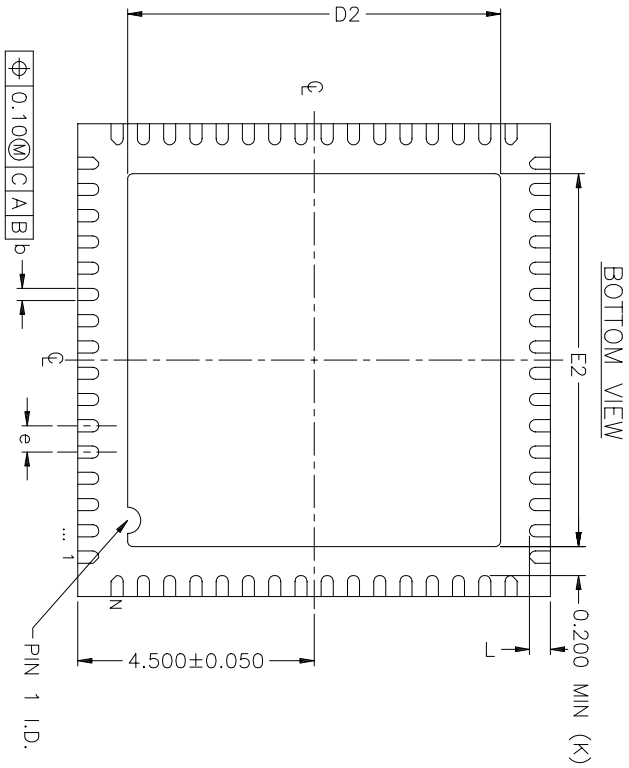
REVISIONS				
DCN	REV	DESCRIPTION	DATE	APPROVED
	00	INITIAL RELEASE	01/12/05	PKP
	01	CHANGE D2 AND E2 TO FOLLOW JEDEC GUIDELINE	08/18/06	TU VU
	02	ADD OPTION 2	09/03/08	R. TOR
	03	ADD PUNCH VERSION PAGE 3	01/07/09	R. TOR
	04	CHANGE EXPOSED PAD DIM	02/20/09	R. TOR

## OPTION 1 OPTION 2

<p><b>TOLERANCES UNLESS SPECIFIED</b></p> <p>DECIMAL ANGULAR ±1°</p> <p>XX±.1.05</p> <p>XXX±.030</p> <p>APPROVALS DATE</p> <p>DRAWN 11/04/04</p> <p>CHECKED</p>	<p><b>6024 SILVER CREEK VALLEY ROAD, SAN JOSE, CA 95138</b></p> <p><b>PHONE: (408) 284-8200</b></p> <p><b>FAX: (408) 284-3572</b></p>
<p><b>www.IDT.com</b></p>	
<p><b>TITLE</b> NL/NLG PACKAGE OUTLINE</p> <p>9.0 x 9.0 mm BODY</p> <p>VFOFP-N</p>	
<p>SIZE <b>C</b></p> <p>DRAWING No. <b>PSC-4147</b></p>	<p>DO NOT SCALE DRAWING</p> <p>SHEET 1 OF 3</p>
<p>REV <b>04</b></p>	

**ATTACHMENT III - PCN #:A0902-03  
PACKAGE DRAWING**

# OPTION 2



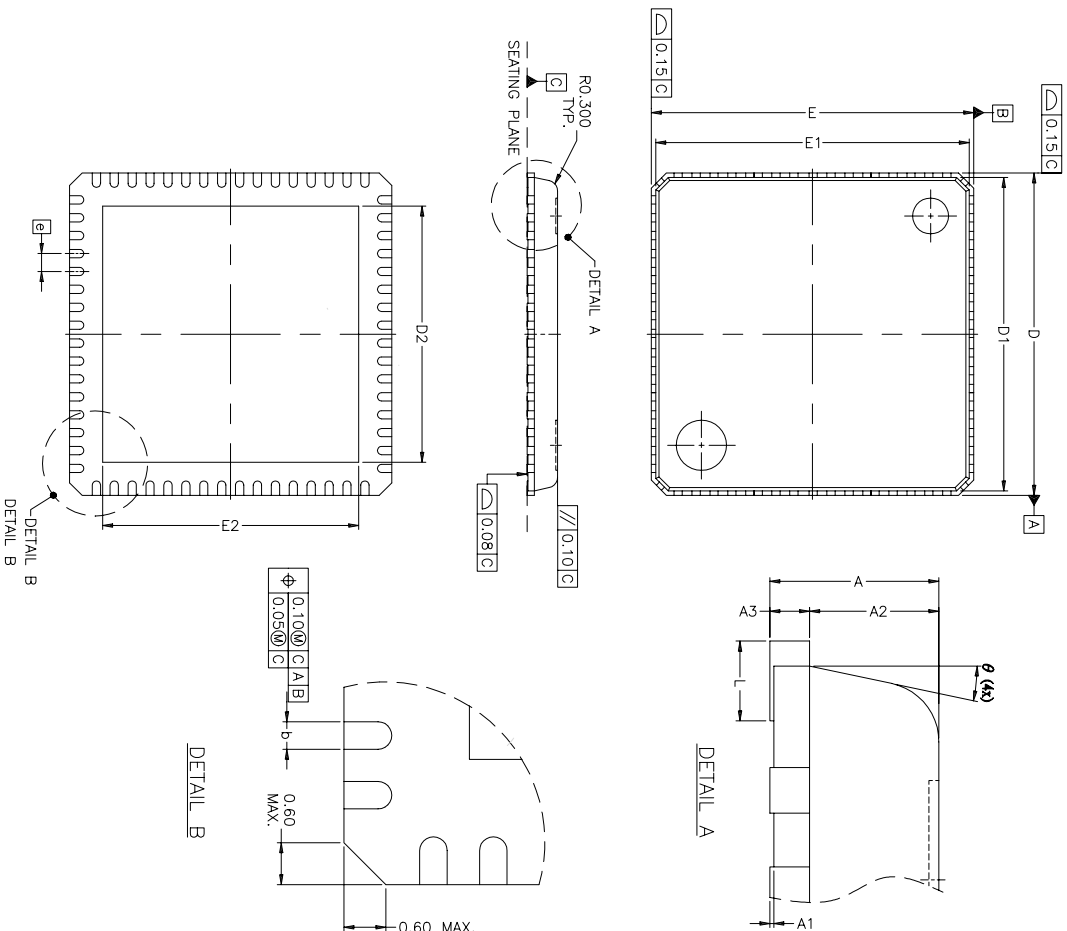
REVISIONS				
DCN	REV	DESCRIPTION	DATE	APPROVED
	00	INITIAL RELEASE	01/12/05	PKP
	01	CHANGE D2 AND E2 TO FOLLOW JEDEC GUIDELINE	08/18/06	TU VU
	02	ADD OPTION 2	09/03/08	R TOR
	03	ADD PUNCH VERSION PAGE 3	01/07/09	R TOR
	04	CHANGE EXPOSED PAD DIM	02/20/09	R TOR

NOTE :  
1. DRAWING CONFORMS TO JEDEC REFERENCE MO-220 REV. 1 VARIATION VMMD-4

TOLERANCES UNLESS SPECIFIED DECIMAL ANGULAR ±1° XX± .105 XXX± .030		<b>IDT</b> www.IDT.com 6024 SILVER CREEK VALLEY ROAD, SAN JOSE, CA 95138 PHONE: (408) 284-8200 FAX: (408) 284-3572	
APPROVALS DRAWN: $\phi$ XX $\phi$ CHECKED:	DATE 11/04/04	TITLE N1U/N1G PACKAGE OUTLINE 9.0 x 9.0 mm BODY VFQFP-N	SIZE C DRAWING No. PSC-4147
DO NOT SCALE DRAWING		SHEET 2 OF 3	REV 04

**ATTACHMENT III - PCN #:A0902-03  
PACKAGE DRAWING**

**PUNCH VERSION**



SYMBOL	DIMENSION (MM)			DIMENSION (MIL)		
	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.
A	0.80	0.85	1.00	31	33	39
A1	0.00	0.02	0.05	0	1	2
A2	-	0.65	1.00	-	26	39
A3	-	0.20	-	-	8	-
b	0.18	0.25	0.30	7	10	12
D	9.00 BSC			354 BSC		
D1	8.75 BSC			344 BSC		
D2	6.00	6.15	6.30	236	242	248
E	9.00 BSC			354 BSC		
E1	8.75 BSC			344 BSC		
E2	6.00	6.15	6.30	236	242	248
e	0.50 BSC			20 BSC		
L	0.30	0.40	0.50	12	16	20
theta	0°	-	14°	0°	-	14°

- NOTE :
1. REFER TO JEDEC STD: MO-220.
  2. DIMENSION "b" APPLIES TO METALLIZED TERMINAL AND IS MEASURED BETWEEN 0.15MM AND 0.30MM FROM THE TERMINAL TIP. IF THE TERMINAL HAS OPTIONAL RADIUS ON THE OTHER END OF THE TERMINAL, THE DIMENSION B SHOULD NOT BE MEASURED IN THAT RADIUS AREA.

REVISIONS				
DCN	REV	DESCRIPTION	DATE	APPROVED
	00	INITIAL RELEASE	01/12/05	PKP
	01	CHANGE D2 AND E2 TO FOLLOW JEDEC GUIDELINE	08/18/06	TU VU
	02	ADD OPTION 2	09/03/08	R TOR
	03	ADD PUNCH VERSION PAGE 3	01/07/09	R TOR
	04	CHANGE EXPOSED PAD DIM	02/20/09	R TOR

TOLERANCES UNLESS SPECIFIED DECIMAL ±1° ANGULAR ±1°	6024 SILVER CREEK VALLEY ROAD, SAN JOSE, CA 95138 PHONE: (408) 284-8200 FAX: (408) 284-3572
XX± .105 XXX± .030	<b>IDT</b> www.IDT.com
APPROVALS DATE	TITLE NUG/NUG PACKAGE OUTLINE
DRAWN 02/04/04 CHECKED	9.0 x 9.0 mm BODY VFQFP-N

SIZE C	DRAWING No. PSC-4147	REV 04
DO NOT SCALE DRAWING		SHEET 3 OF 3