

EVALUATION & DEVELOPMENT INTERFACE BOARD

Content:

- 1. Title Page
- 2. Local & Isolated Power
- 3. USB Interface
- 4. Interface to Mote Eval/Dev Board

Notes:

- 1. Assembly Options:
 - 1.a) Disconnect switches not loaded (use isolator OE instead)
 - 1.b) Placeholder USB_SPARE1, USB_SPARE2 not connected
 - 1.c) Load T2, D3 & D4
- 2. Associated Documents



Revision History:

Rev	Description	ECO	Author
01	Initial release	1106	CN
02	Includes Rework Instructions Notes From Document 003-0057 (700-0184 REV1 --> REV2)	1126	CN
03	Move Ext. JTAG to isolated side Enable ISO_RESETh output on JTAG or SPI Use MOTE_OFF to disable IO switches VCCA_SW switch V+ "boost" resistor to COM pin Option to connect VCCA_SW to VCCA (no switch to VBAT)	1121	CN
04	Add Reference to DC9006A	1127	CN
05	Update Title Block	1145	CN
06	Update pushbutton switch (BOM only)	1159	CN
07	Remove caps, series term only	1402	RMP



LTC CONFIDENTIAL - FOR CUSTOMER USE ONLY

CUSTOMER NOTICE

LINEAR TECHNOLOGY HAS MADE A BEST EFFORT TO DESIGN A CIRCUIT THAT MEETS CUSTOMER-SUPPLIED SPECIFICATIONS; HOWEVER, IT REMAINS THE CUSTOMER'S RESPONSIBILITY TO VERIFY PROPER AND RELIABLE OPERATION IN THE ACTUAL APPLICATION. COMPONENT SUBSTITUTION AND PRINTED CIRCUIT BOARD LAYOUT MAY SIGNIFICANTLY AFFECT CIRCUIT PERFORMANCE OR RELIABILITY. CONTACT LINEAR TECHNOLOGY APPLICATIONS ENGINEERING FOR ASSISTANCE.

THIS CIRCUIT IS PROPRIETARY TO LINEAR TECHNOLOGY AND IS SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.

CONTRACT NO.

APPROVALS

DRAWN:

CHECKED:

APPROVED:

ENGINEER:

DESIGNER:

Linear Technology Corporation

1630 McCarthy Blvd. Phone: (408)432-1900
Milpitas, CA 95035 Fax: (408)434-0507

TITLE:

DC9006A

PCA SCHEMATICS, EVAL/DEV INTERFACE BOARD, PITT

SIZE

DWG NO.

710-0184

REV

07

DATE:

Sunday, August 17, 2014

SHEET 1 OF 5

POWER

NON-ISOLATED

ISOLATED

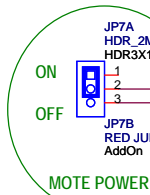
- HOLE1 UNPLATED 125/300
- HOLE2 UNPLATED 125/300
- HOLE7 UNPLATED 125/300
- HOLE8 UNPLATED 125/300

- HOLE3 UNPLATED 125/300
- HOLE6 UNPLATED 125/300
- HOLE4 UNPLATED 125/300
- HOLE5 UNPLATED 125/300

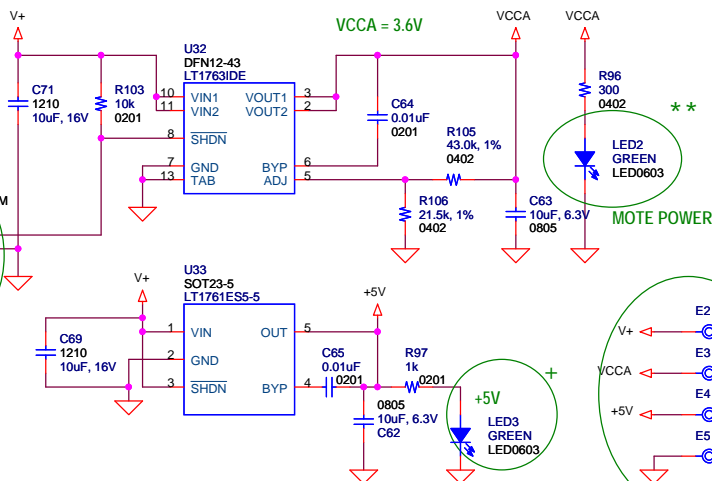


BASIC ISOLATION 1.4MM
CREEPAGE AND
CLEARANCE

ISOLATED



MOTE POWER



ISOLATED

NON-ISOLATED



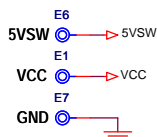
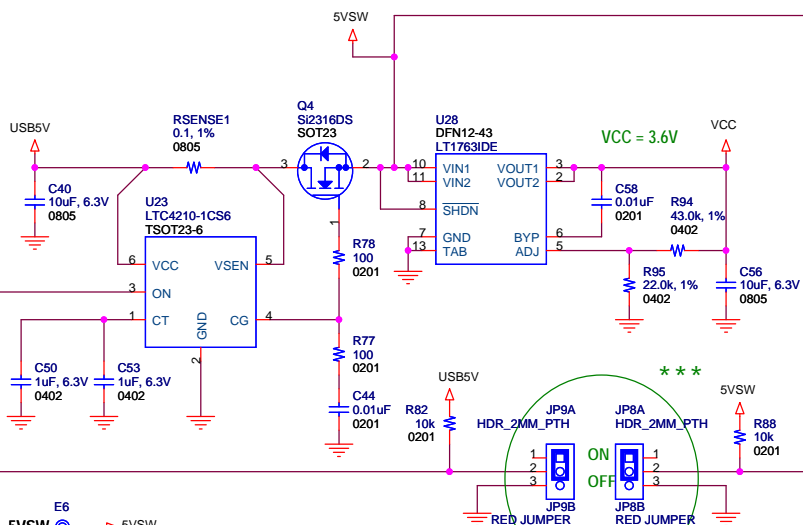
(*) & (**) ANNOTATE SILK WITH:
"MOTE POWER" NEAR JP1 AND LED1;
"ON" & "OFF" NEAR JP1 PIN 1 AND 3
RESP.

(++) ANNOTATE SILK WITH SIGNAL NAMES

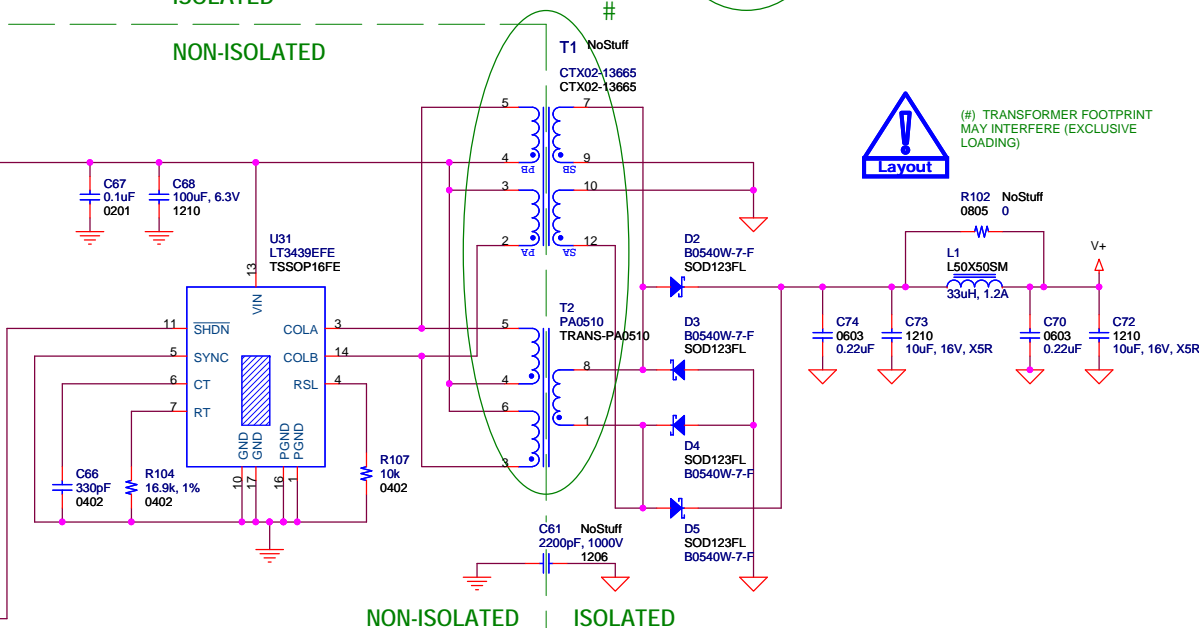
(+) ANNOTATE SILK WITH: "+5V"



(#) TRANSFORMER FOOTPRINT
MAY INTERFERE (EXCLUSIVE
LOADING)



(***) ANNOTATE SILK WITH "SW",
"ISO", "ON" & "OFF" AS SHOWN.



NON-ISOLATED

ISOLATED



LTC CONFIDENTIAL - FOR CUSTOMER USE ONLY

CUSTOMER NOTICE

LINEAR TECHNOLOGY HAS MADE A BEST EFFORT TO DESIGN A CIRCUIT THAT MEETS CUSTOMER-SUPPLIED SPECIFICATIONS; HOWEVER, IT REMAINS THE CUSTOMER'S RESPONSIBILITY TO VERIFY PROPER AND RELIABLE OPERATION IN THE ACTUAL APPLICATION. COMPONENT SUBSTITUTION AND PRINTED CIRCUIT BOARD LAYOUT MAY SIGNIFICANTLY AFFECT CIRCUIT PERFORMANCE OR RELIABILITY. CONTACT LINEAR TECHNOLOGY APPLICATIONS ENGINEERING FOR ASSISTANCE.

THIS CIRCUIT IS PROPRIETARY TO LINEAR TECHNOLOGY AND IS SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.

CONTRACT NO.

APPROVALS

DRAWN:

CHECKED:

APPROVED:

ENGINEER:

DESIGNER:



Linear Technology Corporation

1630 McCarthy Blvd.
Milpitas, CA 95035

Phone: (408)432-1900
Fax: (408)434-0507

TITLE: DC9006A

PCA SCHEMATICS, EVAL/DEV INTERFACE BOARD, PITT

SIZE

DWG NO.

710-0184

REV

07

DATE: Wednesday, September 10, 2014

SHEET 2 OF 5

USB & EXTERNAL JTAG INTERFACE



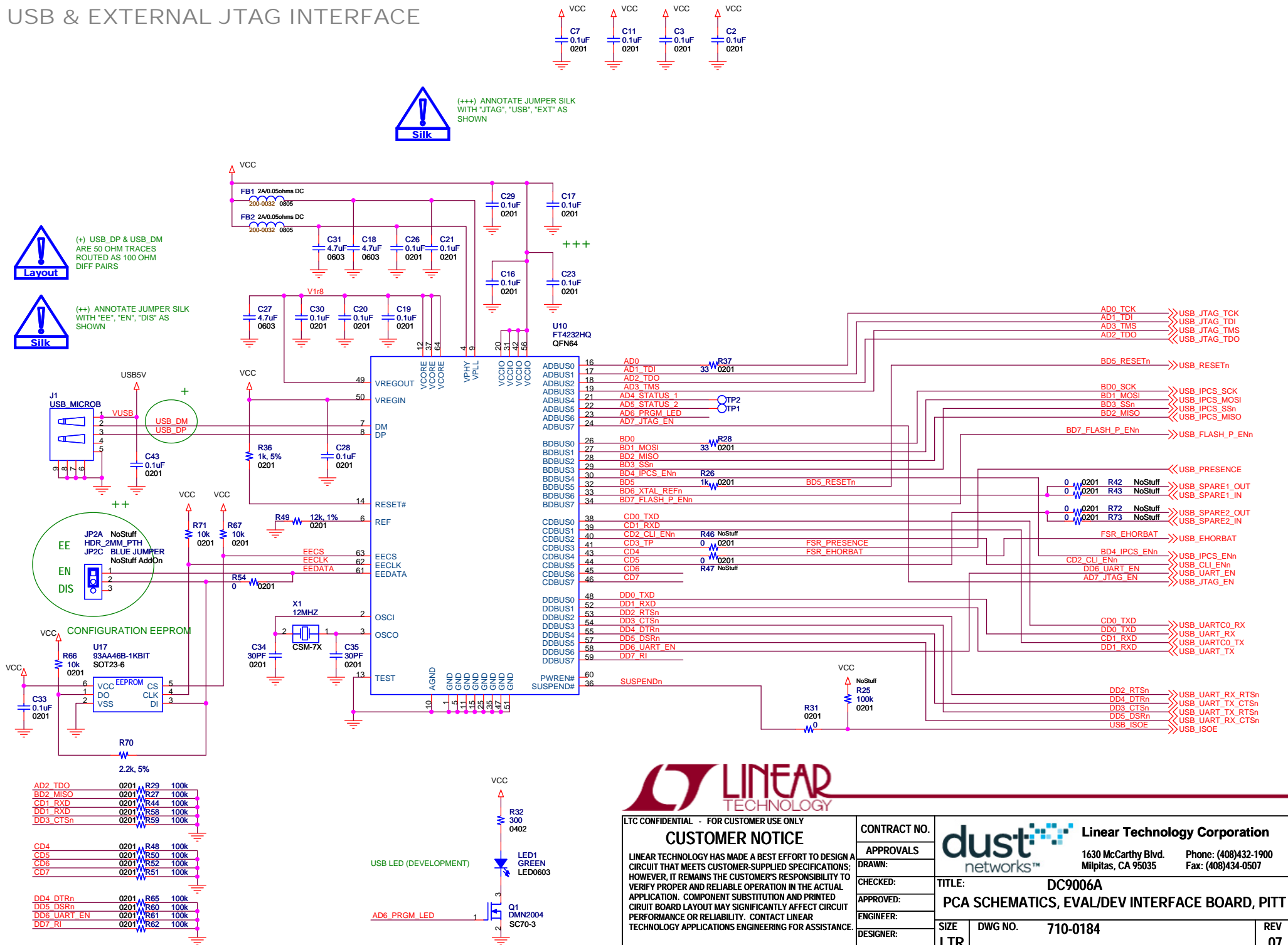
(+) USB_DP & USB_DM ARE 50 OHM TRACES ROUTED AS 100 OHM DIFF PAIRS



(++) ANNOTATE JUMPER SILK WITH "EE", "EN", "DIS" AS SHOWN




(++) ANNOTATE JUMPER SILK WITH "JTAG", "USB", "EXT" AS SHOWN



LTC CONFIDENTIAL - FOR CUSTOMER USE ONLY

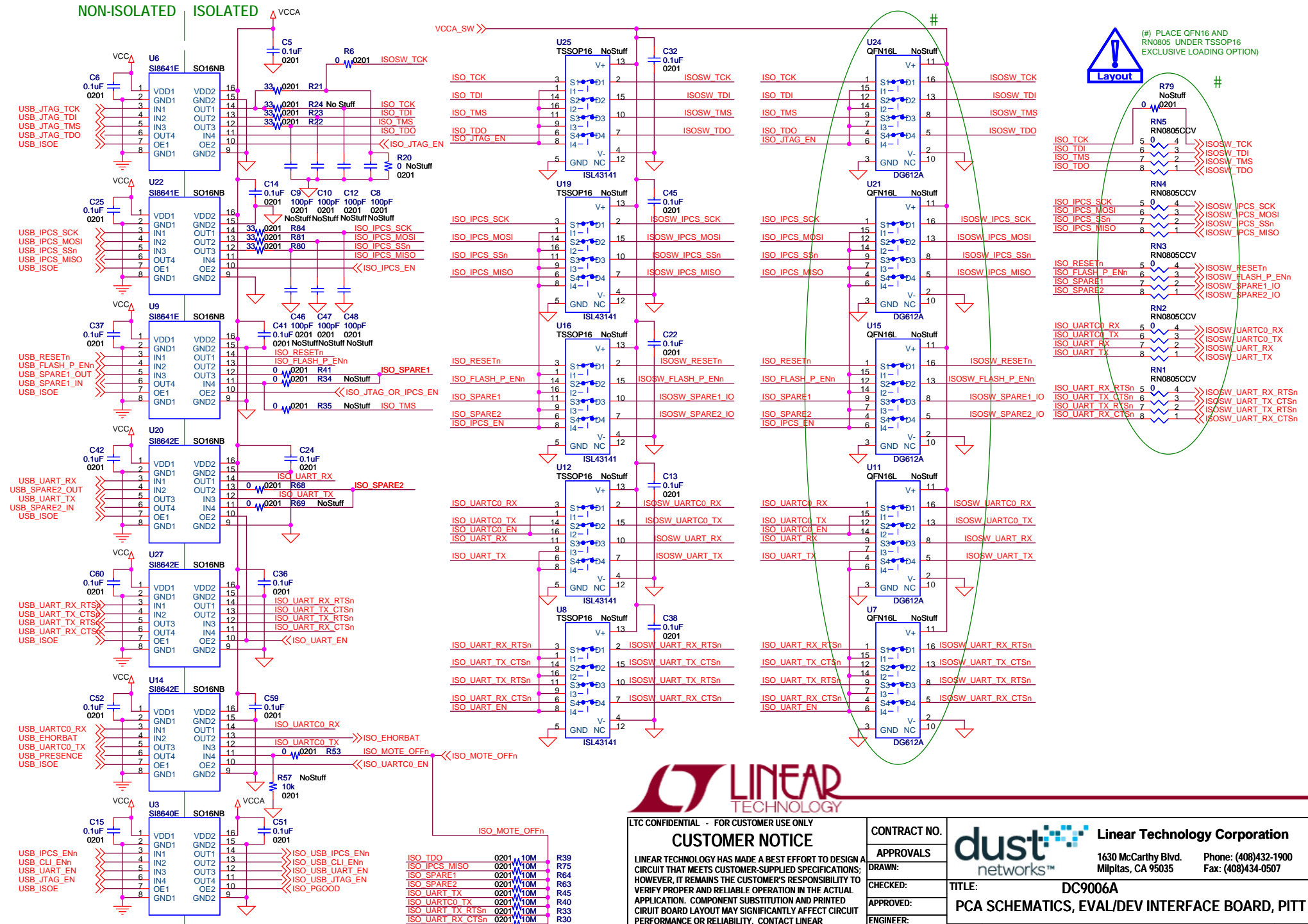
CUSTOMER NOTICE

LINEAR TECHNOLOGY HAS MADE A BEST EFFORT TO DESIGN A CIRCUIT THAT MEETS CUSTOMER-SUPPLIED SPECIFICATIONS; HOWEVER, IT REMAINS THE CUSTOMER'S RESPONSIBILITY TO VERIFY PROPER AND RELIABLE OPERATION IN THE ACTUAL APPLICATION. COMPONENT SUBSTITUTION AND PRINTED CIRCUIT BOARD LAYOUT MAY SIGNIFICANTLY AFFECT CIRCUIT PERFORMANCE OR RELIABILITY. CONTACT LINEAR TECHNOLOGY APPLICATIONS ENGINEERING FOR ASSISTANCE.

CONTRACT NO.		 Linear Technology Corporation 1630 McCarthy Blvd. Phone: (408)432-1900 Milpitas, CA 95035 Fax: (408)434-0507	
APPROVALS			
DRAWN:	CHECKED:	TITLE: DC9006A PCA SCHEMATICS, EVAL/DEV INTERFACE BOARD, PITT	
APPROVED:	ENGINEER:		
DESIGNER:	SIZE LTR	DWG NO. 710-0184	REV 07
DATE:	Wednesday, September 10, 2014		SHEET 3 OF 5

SIGNAL ISOLATION & SWITCHES

NON-ISOLATED ISOLATED



LTC CONFIDENTIAL - FOR CUSTOMER USE ONLY

CUSTOMER NOTICE

LINEAR TECHNOLOGY HAS MADE A BEST EFFORT TO DESIGN A CIRCUIT THAT MEETS CUSTOMER-SUPPLIED SPECIFICATIONS; HOWEVER, IT REMAINS THE CUSTOMER'S RESPONSIBILITY TO VERIFY PROPER AND RELIABLE OPERATION IN THE ACTUAL APPLICATION. COMPONENT SUBSTITUTION AND PRINTED CIRCUIT BOARD LAYOUT MAY SIGNIFICANTLY AFFECT CIRCUIT PERFORMANCE OR RELIABILITY. CONTACT LINEAR TECHNOLOGY APPLICATIONS ENGINEERING FOR ASSISTANCE.

THIS CIRCUIT IS PROPRIETARY TO LINEAR TECHNOLOGY AND IS SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.

CONTRACT NO.

APPROVALS

DRAWN:

CHECKED:

APPROVED:

ENGINEER:

DESIGNER:



Linear Technology Corporation
1630 McCarthy Blvd.
Milpitas, CA 95035
Phone: (408)432-1900
Fax: (408)434-0507

TITLE: **DC9006A**
PCA SCHEMATICS, EVAL/DEV INTERFACE BOARD, PITT

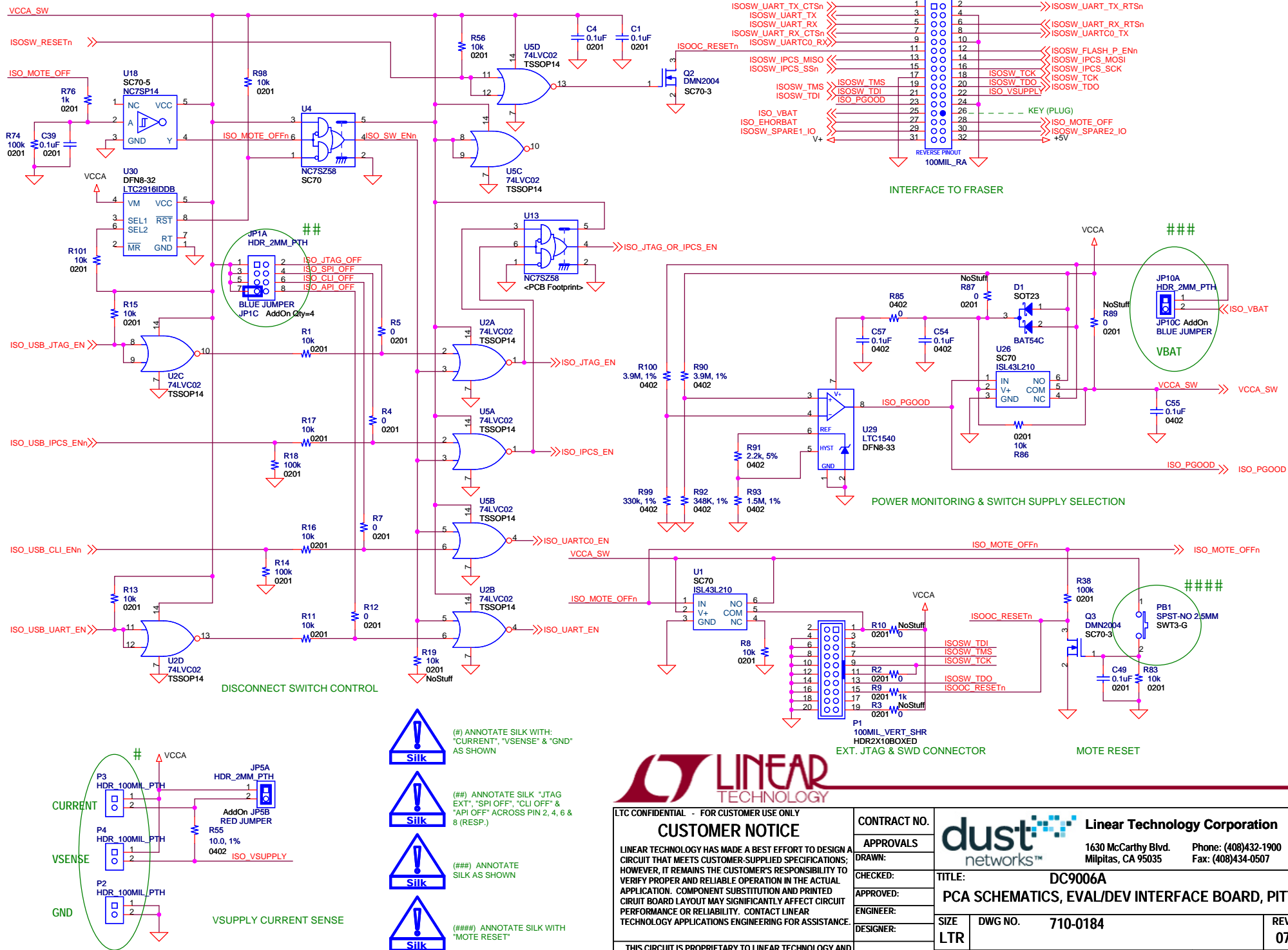
SIZE LTR DWG NO. **710-0184**

DATE: **Wednesday, September 10, 2014**

SHEET **4** OF **5**

REV **07**

INTERFACE TO FRASER & DISCONNECT LOGIC



CUSTOMER NOTICE

LINEAR TECHNOLOGY HAS MADE A BEST EFFORT TO DESIGN A CIRCUIT THAT MEETS CUSTOMER-SUPPLIED SPECIFICATIONS; HOWEVER, IT REMAINS THE CUSTOMER'S RESPONSIBILITY TO VERIFY PROPER AND RELIABLE OPERATION IN THE ACTUAL APPLICATION. COMPONENT SUBSTITUTION AND PRINTED CIRCUIT BOARD LAYOUT MAY SIGNIFICANTLY AFFECT CIRCUIT PERFORMANCE OR RELIABILITY. CONTACT LINEAR TECHNOLOGY APPLICATIONS ENGINEERING FOR ASSISTANCE

THIS CIRCUIT IS PROPRIETARY TO LINEAR TECHNOLOGY AND
IS SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.

CONTRACT NO.

APPROVALS

DRAWN:

CHECKED:

APPROVED

ENGINEER:

dust networks™ **Linear Technology Corporation**
1630 McCarthy Blvd. Phone: (408)432-1900
Milpitas, CA 95035 Fax: (408)434-0507

TITLE:	DC9006A
	PCA SCHEMATICS, EVAL/DEV INTERFACE BOARD, PITT

SIZE	DWG NO.	710-0184	REV
------	---------	----------	-----

DATE: Wednesday, September 10, 2014	SHEET 5 OF 5
-------------------------------------	--------------