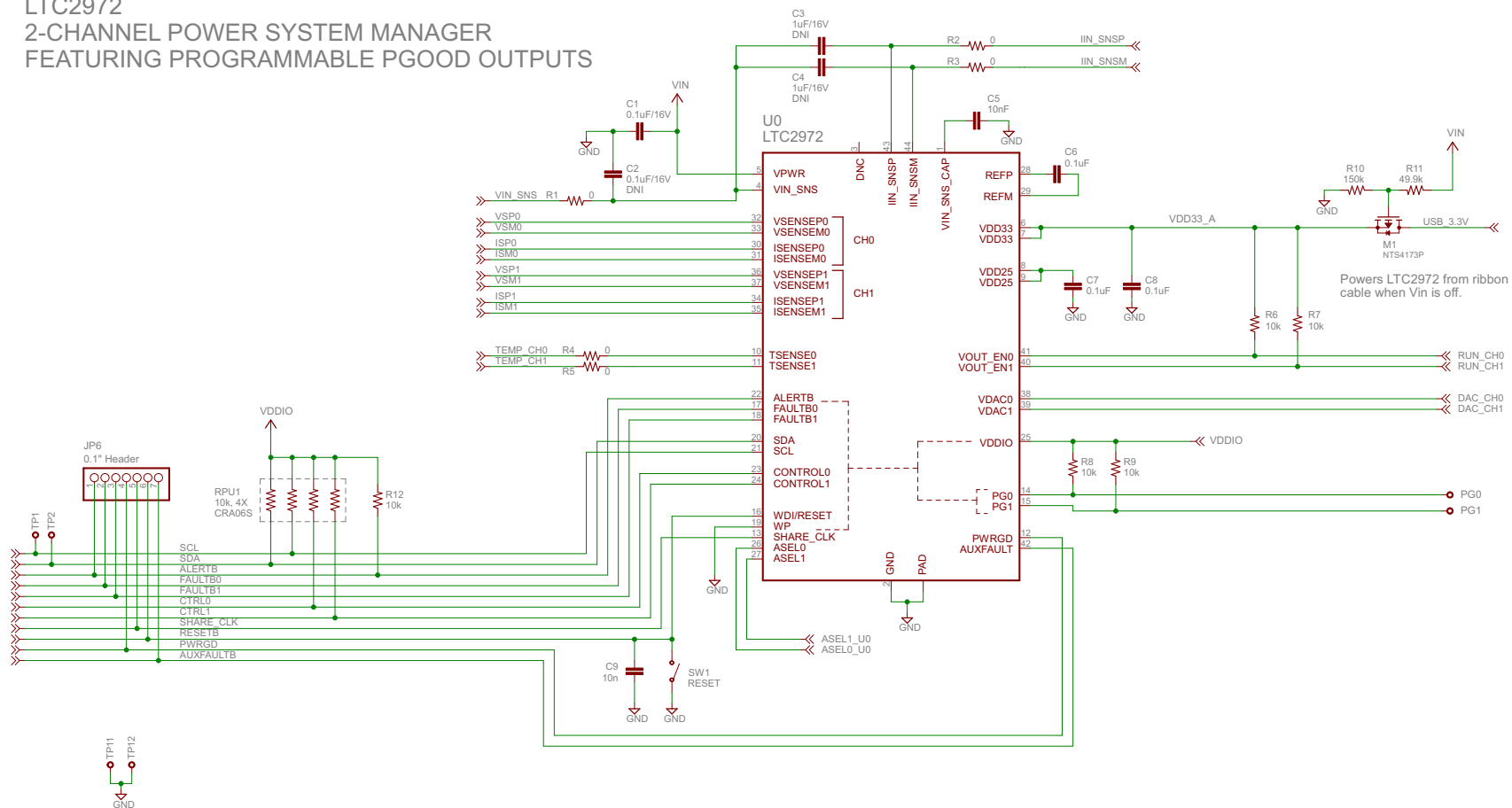


LTC2972 2-CHANNEL POWER SYSTEM MANAGER FEATURING PROGRAMMABLE PGOOD OUTPUTS



NOTES: UNLESS OTHERWISE SPECIFIED:

1. ALL RESISTORS ARE 1% 0402.
2. ALL CAPACITORS ARE 0402.

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.

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APPROVALS

PCB DES. MIKE P.

APP ENG. MIKE P.



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Fax (408) 434-9957
www.linear.com

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TITLE: LTC2972UJF 2-CHANNEL
POWER SYSTEM MANAGER

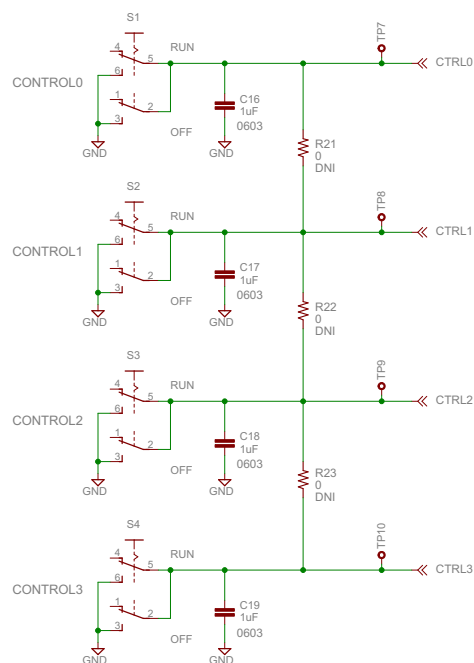
SIZE B IC NO. LTC2972
DEMO CIRCUIT 2675A

REV: 1

DATE: 9/25/2017 10:45:44 AM

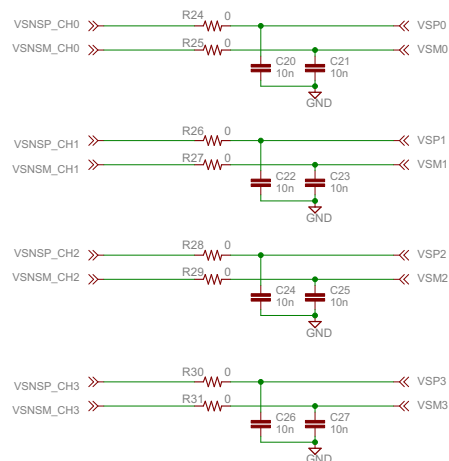
SHEET: 1/5

CTRL Switches

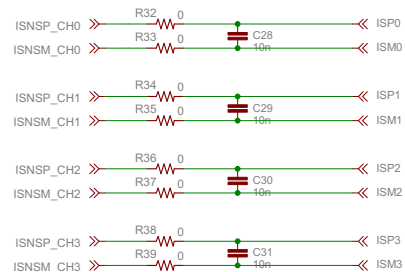


Install R21-R23 to allow one switch to control all channels.
One RUN switch set to 'off' will disable all channels.
Install R21-R23 to allow support for tracking.

Voltage Sense Filtering

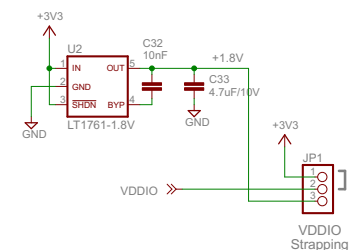


Current Sense Filtering

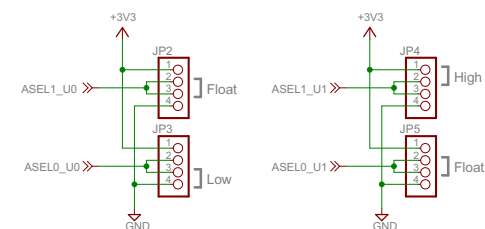


REVISION HISTORY				
ECO	REV	DESCRIPTION	APPROVED	DATE
-	1	PRODUCTION	MIKE P.	

1.8V VDDIO Regulator



Address Select Jumpers



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APPROVALS

PCB DES. MIKE P.

APP ENG. MIKE P.



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TITLE: LTC2972UJF 2-CHANNEL
POWER SYSTEM MANAGER

SIZE B IC NO. LTC2972
DEMO CIRCUIT 2675A

REV: 1

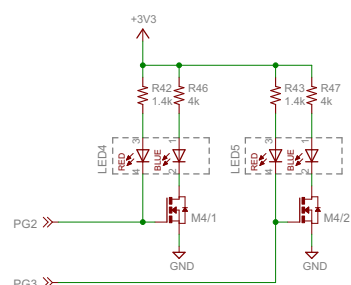
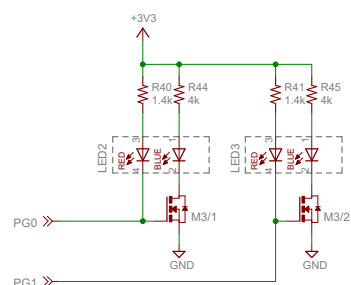
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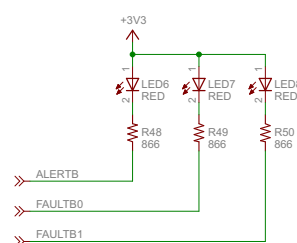
SHEET: 3/5

REVISION HISTORY				
ECO	REV	DESCRIPTION	APPROVED	DATE

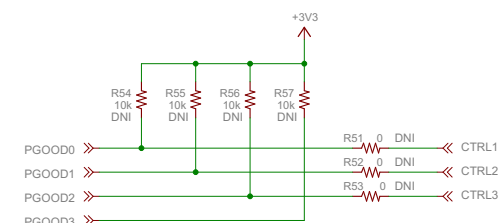
PG LED Indication



Fault LED Indication




PGOOD Pullups to support cascade-on sequencing



If R51-R53 are installed, be sure that RUN switches for CH1-CH3 are in the 'on' position. CH0's RUN switch is used as the main control switch.

NOTES: UNLESS OTHERWISE SPECIFIED:

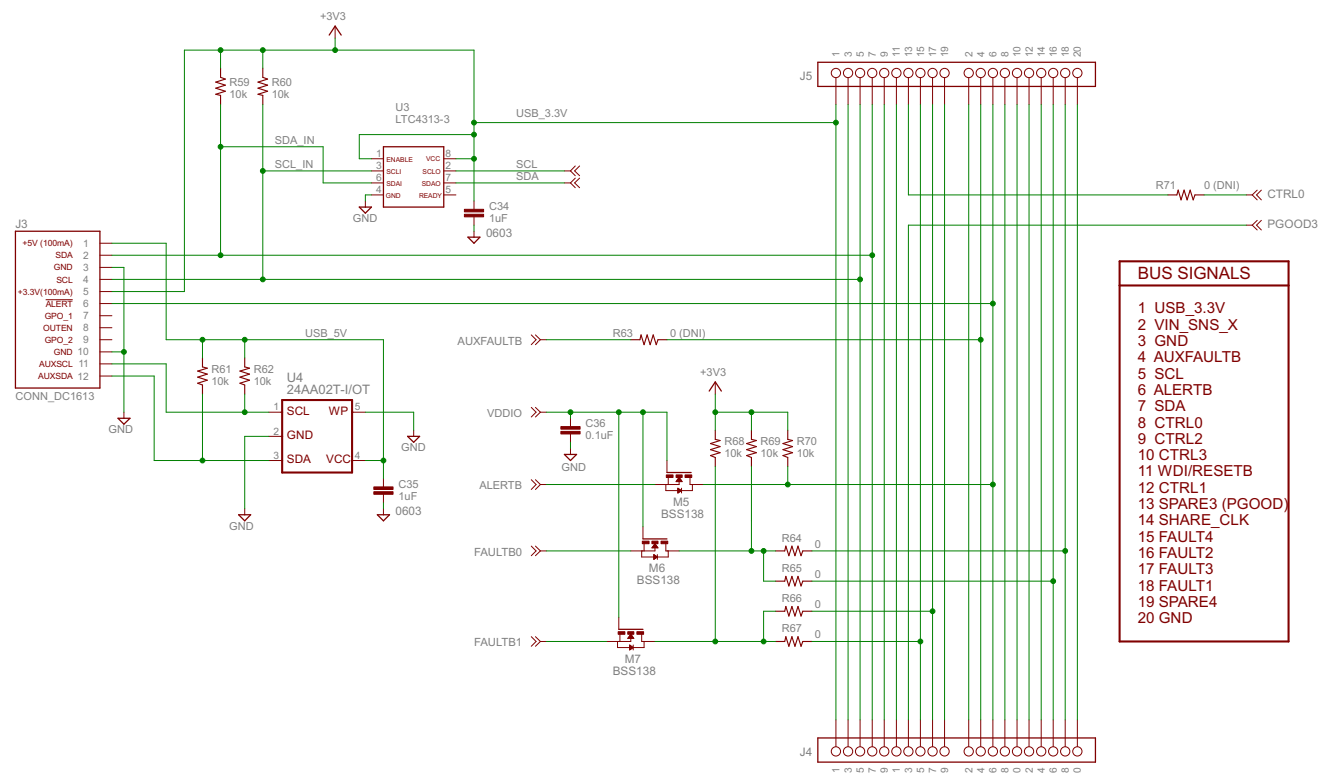
1. ALL RESISTORS ARE 1% 0402.
2. ALL CAPACITORS ARE 0402.

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<p>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.</p> <p>THIS CIRCUIT IS PROPRIETARY TO LINEAR TECHNOLOGY AND SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.</p>		PCB DES.	MIKE P.			
		APP ENG.	MIKE P.			
		TITLE: LTC2972UJF 2-CHANNEL POWER SYSTEM MANAGER				
		SIZE B	IC NO. LTC2972	REV: 1		
				DEMO CIRCUIT 2675A		
SCALE = NONE		DATE: 9/25/2017 10:45:44 AM		SHEET: 4/5		

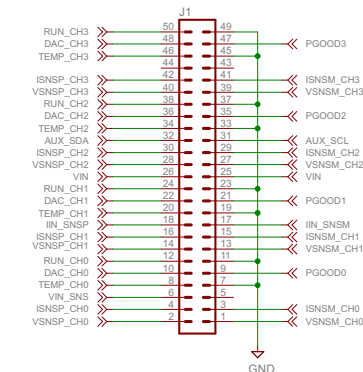
REVISION HISTORY				
ECO	REV	DESCRIPTION	APPROVED	DATE
-	1	PRODUCTION	MIKE P.	

Board-to-Board Expansion Connectors

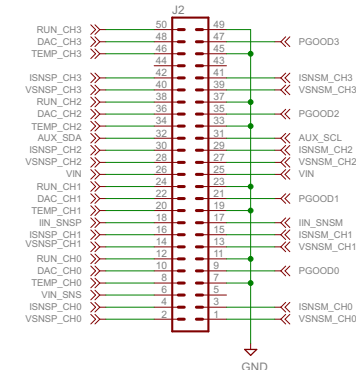
Load Board Connector



BUS SIGNALS	
1	USB_3.3V
2	VIN_SNS_X
3	GND
4	AUXFAULTB
5	SCL
6	ALERTB
7	SDA
8	CTRL0
9	CTRL2
10	CTRL3
11	WDI/RESETB
12	CTRL1
13	SPARE3 (PGOOD)
14	SHARE_CLK
15	FAULT4
16	FAULT2
17	FAULT3
18	FAULT1
19	SPARE4
20	GND



Test Points/ Optional Header



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APPROVALS

PCB DES. MIKE P.

APP ENG. MIKE P.



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TITLE: LTC2972UJF 2-CHANNEL
POWER SYSTEM MANAGER

SIZE B IC NO. LTC2972
DEMO CIRCUIT 2675A

REV: 1

DATE: 9/25/2017 10:45:44 AM

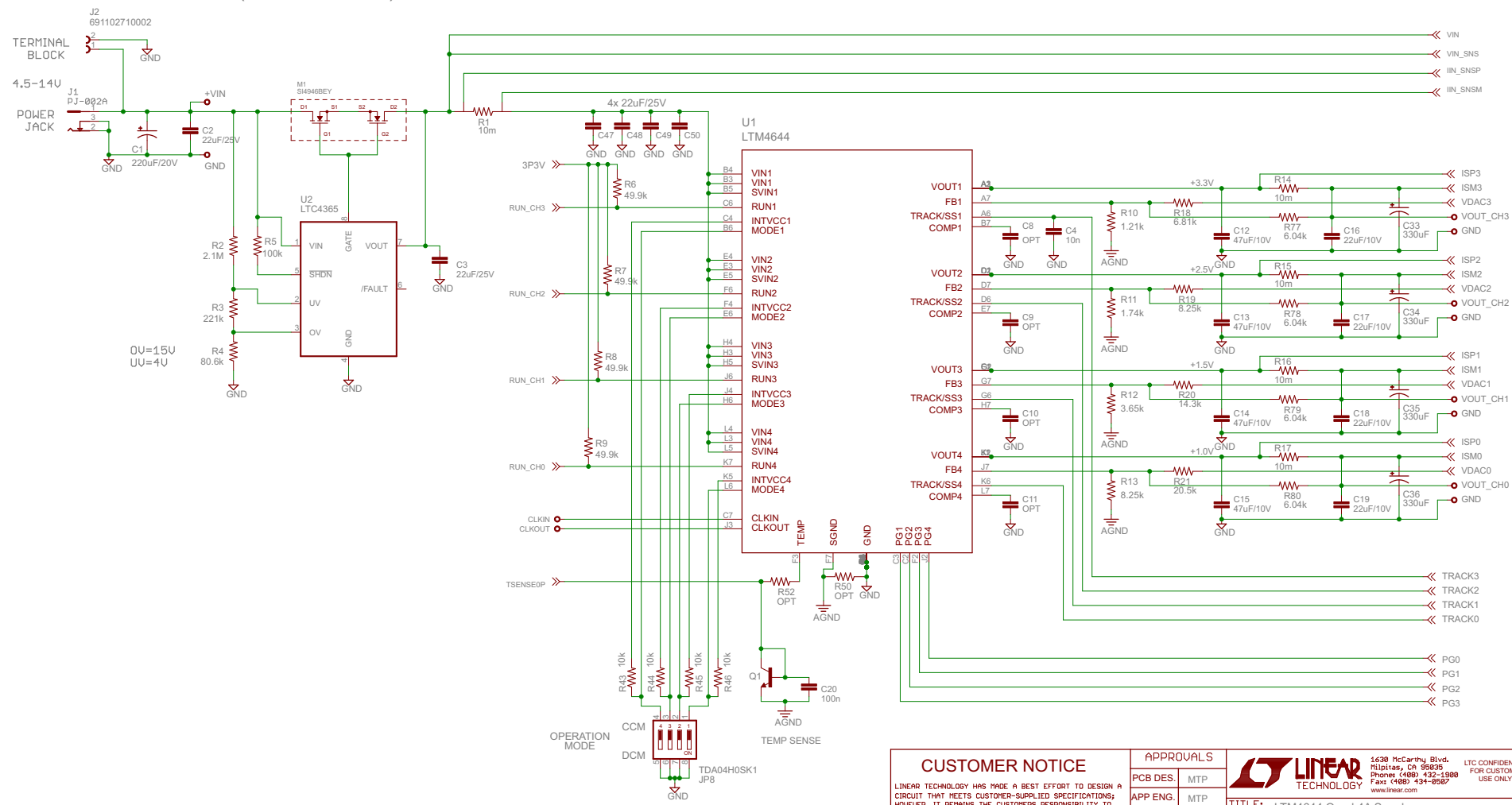
SHEET: 5/5

SCALE = NONE

REVISION HISTORY				
ECO	REV	DESCRIPTION	APPROVED	DATE
-	1a	Production	M. Peters	06-12-15

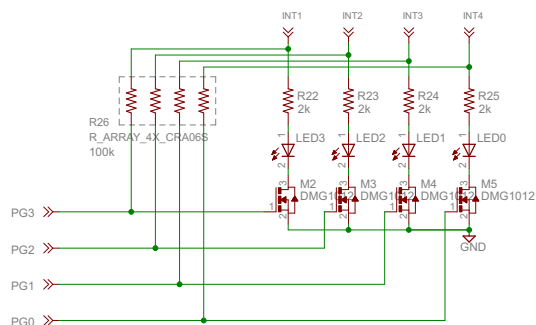
Input Protection (OV/UV/Reverse)

Quad 4A DC/DC Converter

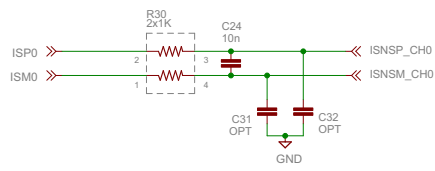
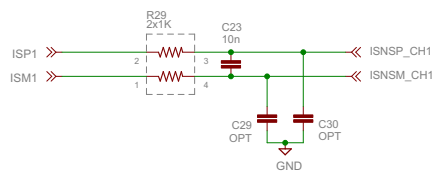
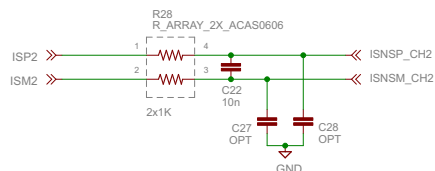
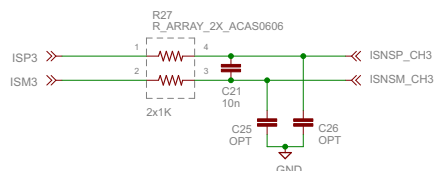


CUSTOMER NOTICE		APPROVALS		LINEAR TECHNOLOGY	
THIS CIRCUIT IS PROPRIETARY TO LINEAR TECHNOLOGY AND SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.		PCB DES.	MTP	1630 McCarthy Blvd. Folsom, CA 95630 Phone: (916) 432-1900 Fax: (916) 434-9957 www.linear.com	
LTC CONFIDENTIAL FOR CUSTOMER USE ONLY		APP ENG.	MTP	TITLE: LTM4644 Quad 4A Supply with 50-pin Connector to Power System Manager	
				SIZE B	REV: 1a
				IC NO. LTM4644	
				Demo Circuit 2363A	
		SCALE = NONE	DATE: 7/2/2015 2:57:19 PM	SHEET: 1/3	

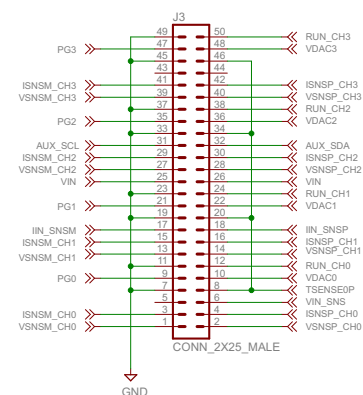
LED Indication



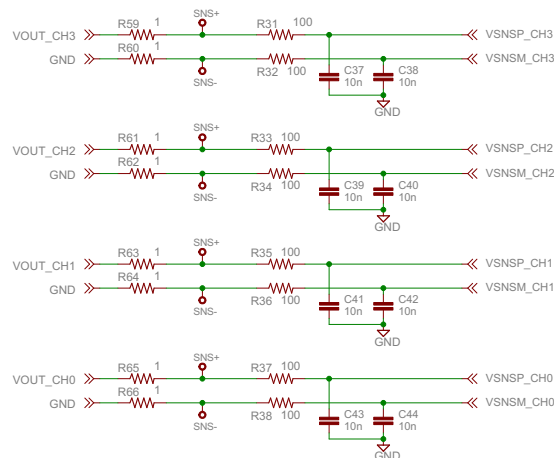
Current Sense Filtering



Board-to-Board Connector

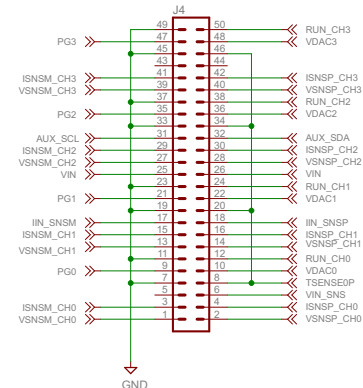


Voltage Sense Filtering



NOTE: REMOVE R59-R66 FOR REMOTE SENSING

Test Points/ Optional Header



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APPROVALS

PCB DES. MTP

APP ENG. MTP



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TITLE: LTM4644 Quad 4A Supply
with 50-pin Connector to Power System Manager

SIZE B IC NO. LTM4644
Demo Circuit 2363A

REV: 1a

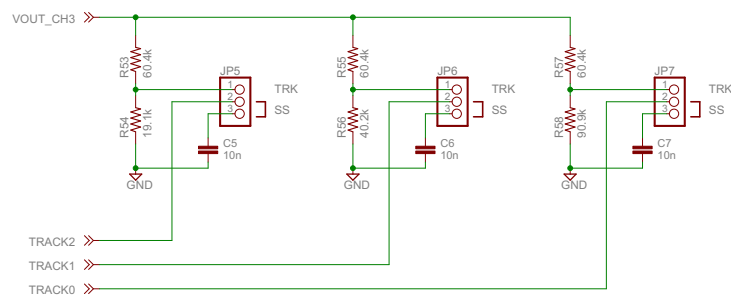
SCALE = NONE

DATE: 7/2/2015 2:57:19 PM

SHEET: 2/3

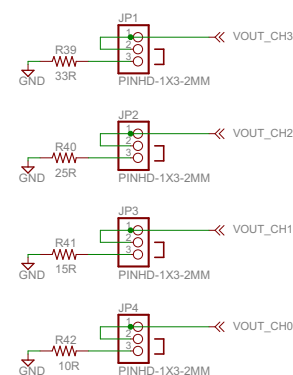
REVISION HISTORY				
ECO	REV	DESCRIPTION	APPROVED	DATE
-	1a	Production	M. Peters	05-12-15

Tracking/SoftStart Jumpers



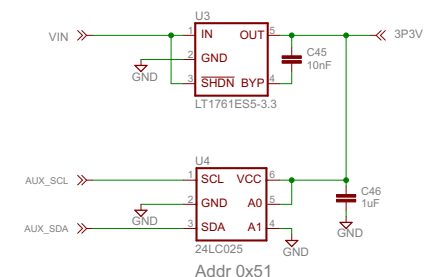
By default, jumpers set to SoftStart

Pre-Load Jumpers



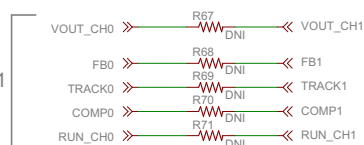
By default, jumpers set to pre-load ON

+3.3V LDO and Identity EEPROM

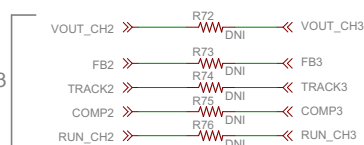


Optional Jumpers for Parallel Operation

Parallel CH0 and CH1



Parallel CH2 and CH3



R67 thru R76 are 0 ohm

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APP ENG. MTP



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SIZE B IC NO. LTM4644
Demo Circuit 2363A

REV: 1a

SCALE = NONE

DATE: 7/2/2015 2:57:19 PM

SHEET: 3/3