NOTES, UNLESS OTHERWISE SPECIFIED:

1. The netname "V_PRE_REG" represents connection to the +10V power plane.
2. All components with designators "U", "D", "Y" and "Q" are electrostatic discharge sensitive.
3. The letters DNI near a part mean "do not install".

COMPUTER GENERATED DRAWING. DO NOT REVISE MANUALLY

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
A	Initial Release	TBD	

Z_PCB1

PCB, DLP5534Q1EVM Driver
DLP034

IMPORTANT NOTICE

Texas Instruments Incorporated and its subsidiaries (TI) reserve the right to make corrections, enhancements, improvements and other changes to its semiconductor products and services per JESD46, latest issue, and to discontinue any product or service per JESD48, latest issue. Buyers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All semiconductor products (also referred to herein as "components") are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its components to the specifications applicable at the time of sale, in accordance with the warranty in TI's terms and conditions of sale of semiconductor products. Testing and other quality control techniques are used to the extent TI deems necessary to support this warranty. Except where mandated by applicable law, testing of all parameters of each component is not necessarily performed.

TI assumes no liability for applications assistance or the design of Buyers' products. Buyers are responsible for their products and applications using TI components. To minimize the risks associated with Buyers' products and applications, Buyers should provide adequate design and operating safeguards.

TI does not warrant or represent that any license, either express or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right relating to any combination, machine, or process in which TI components or services are used. Information published by TI regarding third-party products or services does not constitute a license to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

Reproduction of significant portions of TI information in TI data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.
Resale of TI components or services with statements different from or beyond the parameters stated by TI for that component or service voids all express and any implied warranties for the associated TI component or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

Buyer acknowledges and agrees that it is solely responsible for compliance with all legal, regulatory and safety-related requirements concerning its products, and any use of TI components in its applications, notwithstanding any applications-related information or support that may be provided by TI. Buyer represents and agrees that it has all the necessary expertise to create and implement safeguards which anticipate dangerous consequences of failures, monitor failures and their consequences, lessen the likelihood of failures that might cause harm and take appropriate remedial actions. Buyer will fully indemnify TI and its representatives against any damages arising out of the use of any TI components in safety-critical applications.

In some cases, TI components may be promoted specifically to facilitate safety-related applications. With such components, TI's goal is to help enable customers to design and create their own end-product solutions that meet applicable functional safety standards and requirements. Nonetheless, such components are subject to these terms.

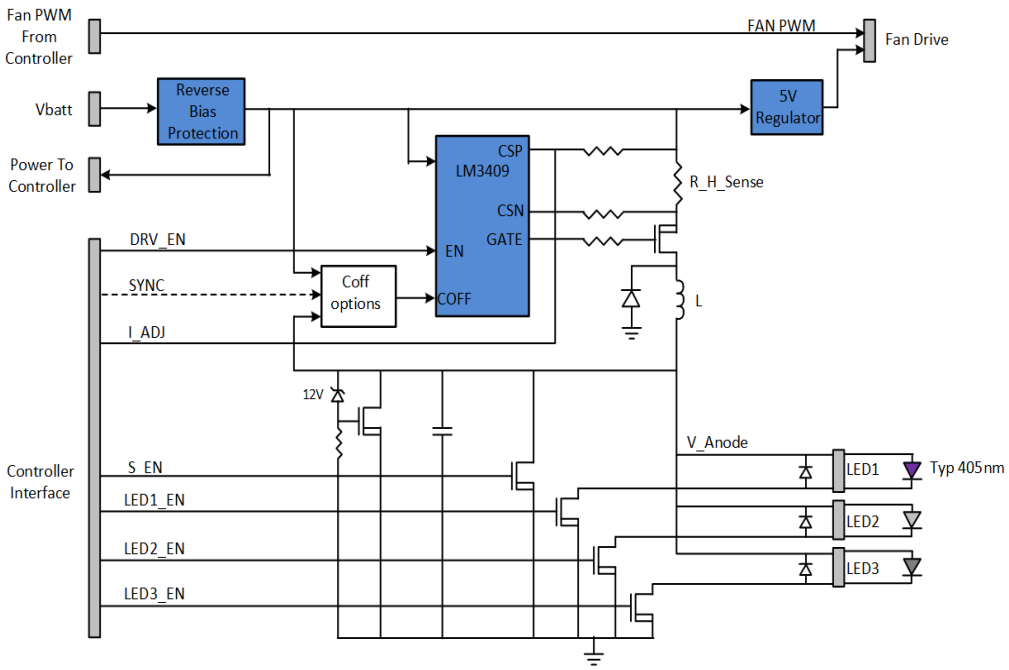
No TI components are authorized for use in FDA Class III (or similar life-critical medical equipment) unless authorized officers of the parties have executed a special agreement specifically governing such use.

Only those TI components which TI has specifically designated as military grade or "enhanced plastic" are designed and intended for use in military/aerospace applications or environments. Buyer acknowledges and agrees that any military or aerospace use of TI components which have not been so designated is solely at the Buyer's risk, and that Buyer is solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI has specifically designated certain components as meeting ISO/TS16949 requirements, mainly for automotive use. In any case of use of non-designated products, TI will not be responsible for any failure to meet ISO/TS16949.

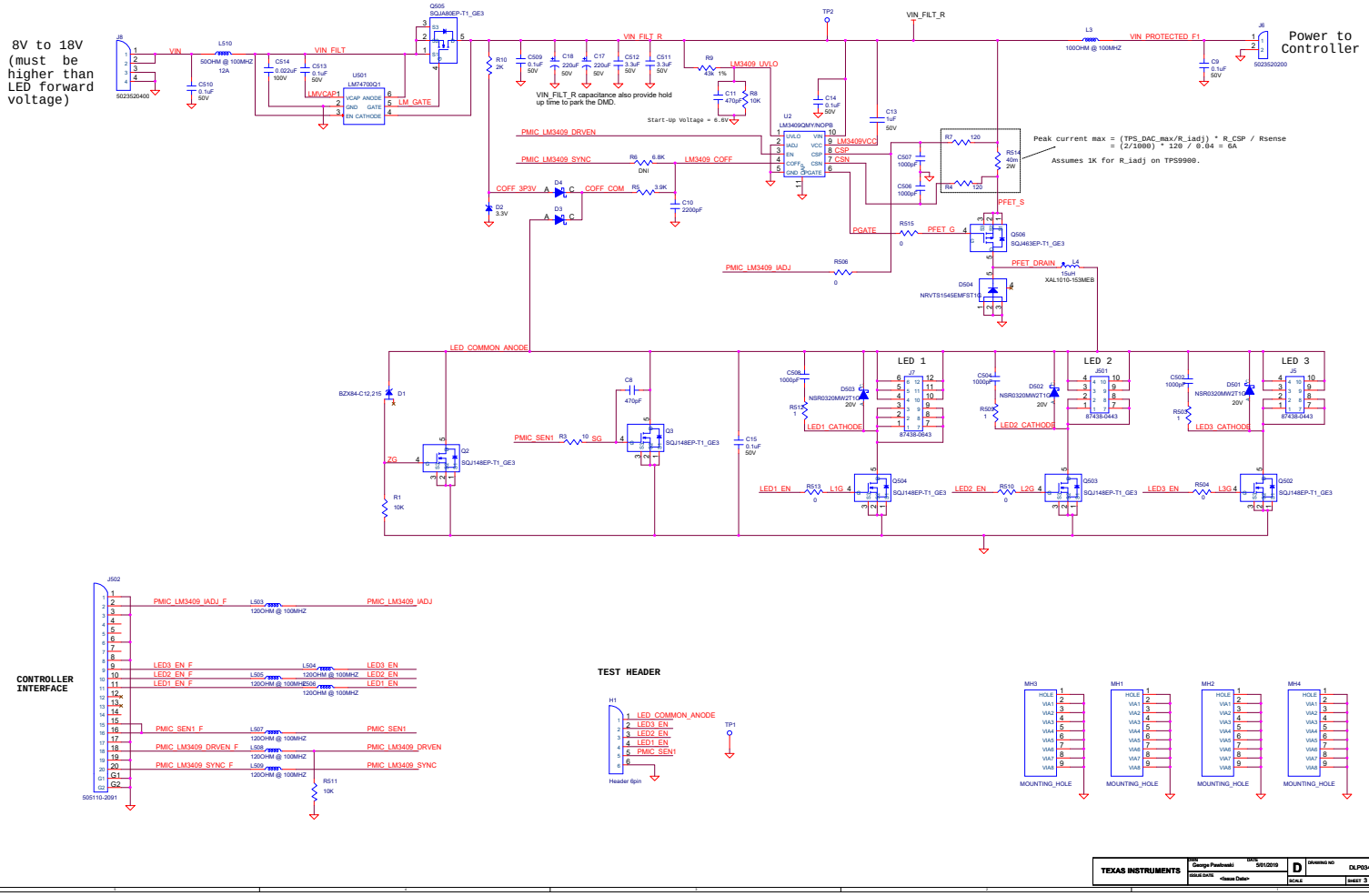
DLP®
TEXAS INSTRUMENTS

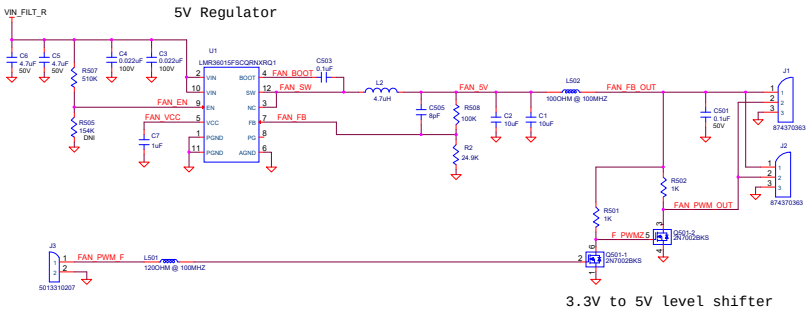
		DWN George Pawlowski DATE 5/01/2019	TEXAS INSTRUMENTS
		ENGR	(C) COPYRIGHT 2019 TEXAS INSTRUMENTS ALL RIGHTS RESERVED
		SYST	
		PRJ	TITLE DLP5534Q1EVM LED Driver
NEXT ASSY	USED ON		D DRAWING NO DLP034 REV A
APPLICATION		SW Cadence Capture 16.6	SCALE SHEET 1 of 4



TEXAS INSTRUMENTS	Drawn: George Pavlowski	DATE: 5/01/2019	D	DRAWING NO: DLP034
	ISSUE DATE: <Issue Date>		SCALE:	SHEET 2 OF 4

REV: A


8V to 18V (must be higher than LED forward voltage)
Power to Controller
VIN
VIN_FILT
VIN_FILT_R
VIN_PROTECTED_F1
LM_GATE
LM3409_UVLO
VIN_FILT_R capacitance also provide hold up time to park the DMD.
Start-Up Voltage = 6.6V
PMIC_LM3409_DRVEN
PMIC_LM3409_SYNC
LM3409_COFF
COFF_3P3V
COFF_COM
PGATE
PFET_G
PFET_S
PFET_DRAIN
PMIC_LM3409_IADJ
LED_COMMON_ANODE
LED 1
LED 2
LED 3
LED1_CATHODE
LED2_CATHODE
LED3_CATHODE
LED1_EN
LED2_EN
LED3_EN
PMIC_SEN1
ZG
SG
Peak current max = (TPS_DAC_max/R_iadj) * R_CSP / Rsense
= (2/1000) * 120 / 0.04 = 6A
Assumes 1K for R_iadj on TPS9900.
CONTROLLER INTERFACE
PMIC_LM3409_IADJ_F
LED3_EN_F
LED2_EN_F
LED1_EN_F
PMIC_SEN1_F
PMIC_LM3409_DRVEN_F
PMIC_LM3409_SYNC_F
TEST HEADER
LED_COMMON_ANODE
LED3_EN
LED2_EN
LED1_EN
PMIC_SEN1
Header 6pin
MOUNTING_HOLE
TEXAS INSTRUMENTS
George Pawlowski
9/01/2019
DLP034
A
SHEET 3 OF 4



Fan Outputs: 5V, 1A max
(total both fans)

3.3V to 5V level shifter

DLP5534Q1EVM Kit Items (Cables, other PCBs)

Z_PCB2 PCB, DLP553XQ1EVM Controller DLP033	Z_CBL1 Flex, OpenLDI 2515719	Z_CBL5 Cable Assy, Driver to Controller Power CBL016-003	Z_CBL9 Cable Assy, LED3 CBL016-007
	Z_CBL2 FFC, 0.50", 20 Circuit, 152mm 151660215	Z_CBL6 Cable Assy, Driver Input Power CBL016-004	Z_CBL10 Cable Assy, Fan PWM CBL016-008
	Z_CBL3 Cable Assy, SPI Cheetah CBL016-001	Z_CBL7 Cable Assy, LED1 CBL016-005	Z_CBL11 Cheetah USB to SPI adapter TP280121
	Z_CBL4 Cable Assy, Host I2C, INTZ, PROJ_ON CBL016-002	Z_CBL8 Cable Assy, LED2 CBL016-006	Z_CBL12 Cable, HDMI Type D to Type A, 1.5M 68786-0002

TEXAS INSTRUMENTS	DRAWN George Pavlowski	DATE 5/01/2019	D	DRAWING NO DLP034
	ISSUE DATE <Issue Date>	SCALE	SHEET 4 OF 4	REV A