

# LITIX™ Power APPBOARD TLD5098EL V3 Manual

## Boost To Battery Configuration Without Output Filter

24.11.2017

ATV BP LI

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# LITIX™ Power TLD5098EL

## Topology: Boost To Battery - APPBOARD TLD5098EL V3

The APPBOARD TLD5098EL V3 uses the TLD5098D as a Boost To Battery (buck boost) constant current LED driver

Board Characteristics:

Input Voltage :

6V - 45V

Output Current Current:

300mA (Can be changed replacing RFB, up to 1,5A)

Switching Frequency:

300kHz (Can be changed replacing RFREQ)

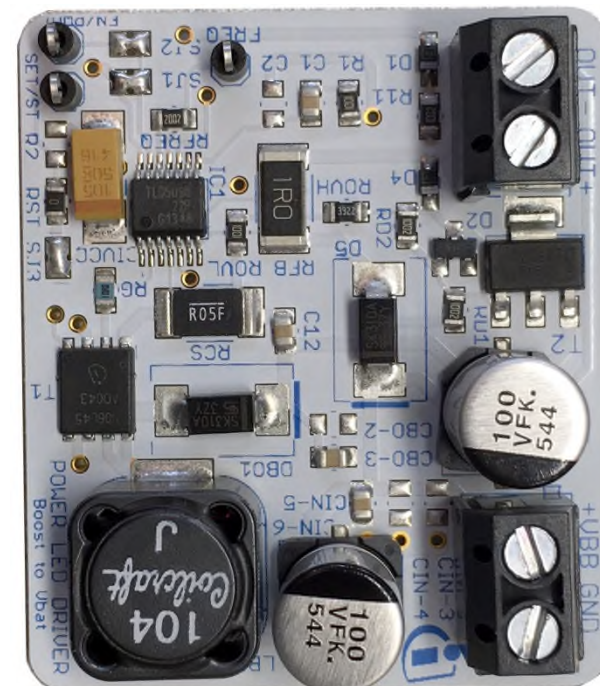
Load Voltage :

in Boost to Battery configuration Load Voltage is added to the battery voltage

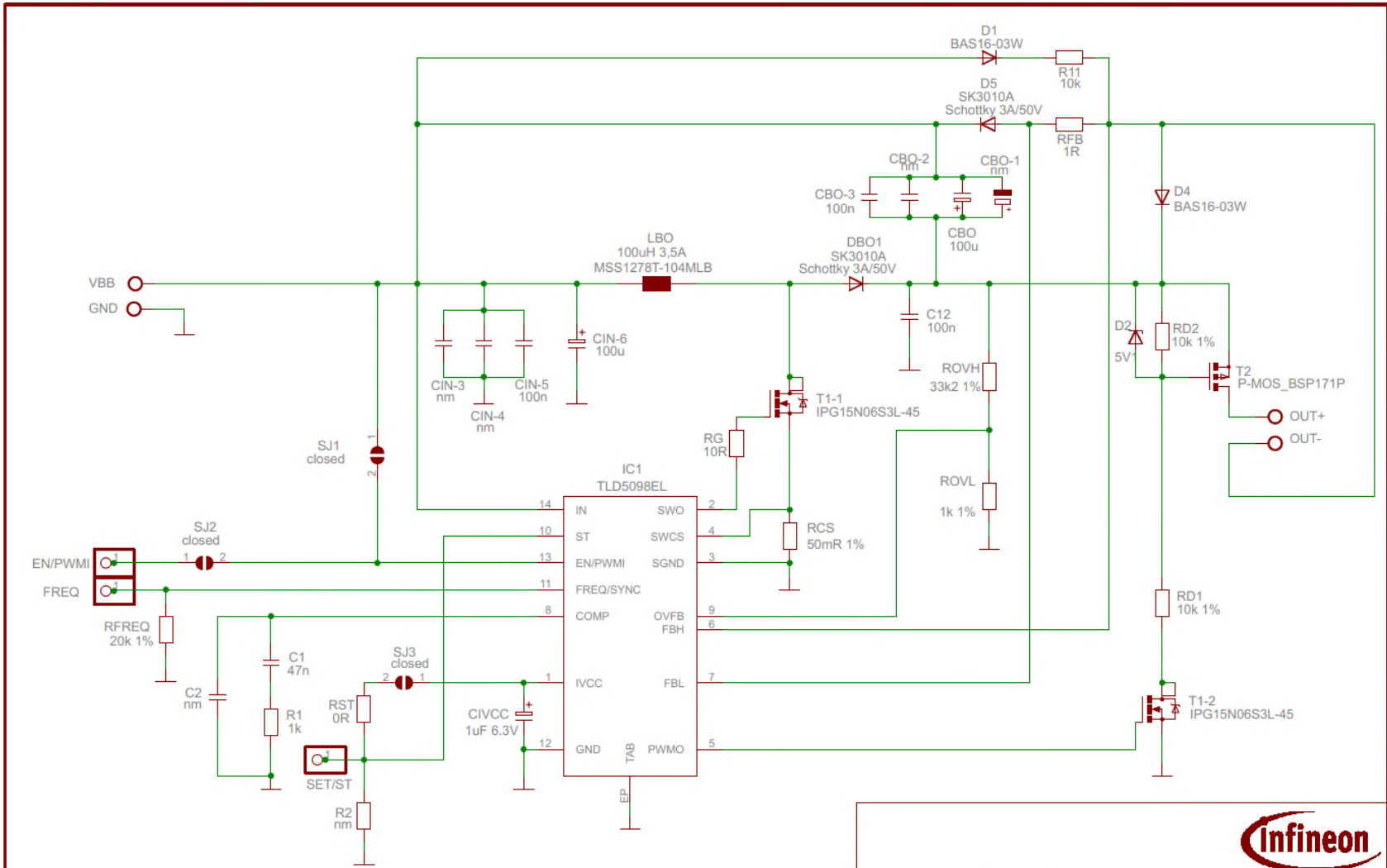
So the Overvoltage Protection is limiting Vload to:

39V-Input Voltage

This Value can be changed via ROVH/ROVL resistors



# APPBOARD TLD5098EL V3 schematic



POWER LED DRIVER Boost to Vbat (B2B)

TITLE: ApplicationBoard\_TLD5098\_02BEM2-Center  
 Date: 09.09.2014 13:26:13 Sheet: 1/1

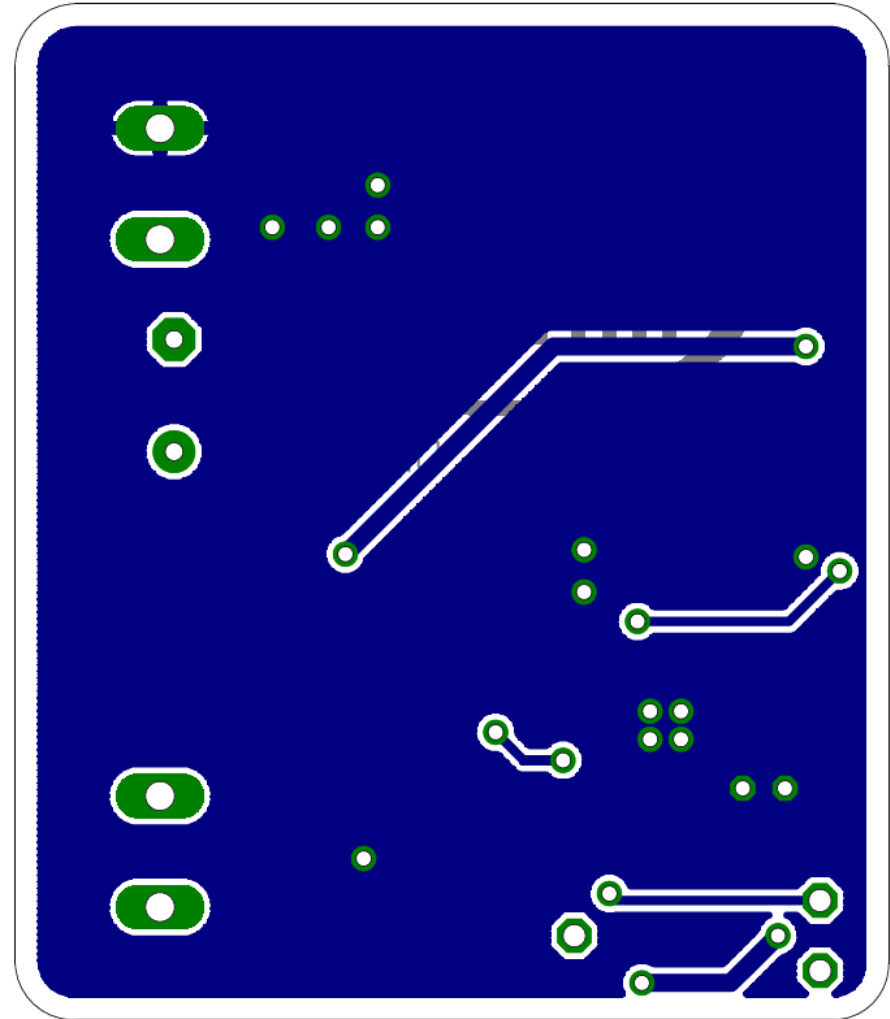
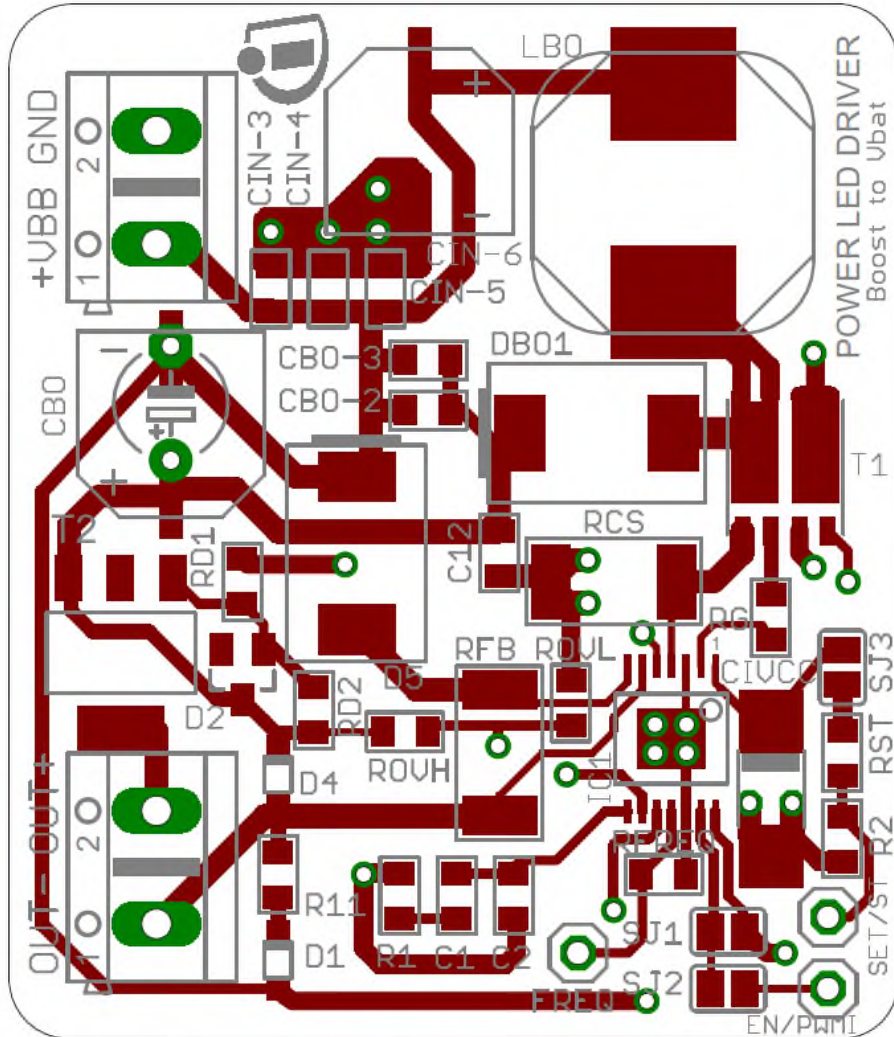
# APPBOARD TLD5098EL V3

## BOM



Part	Value	Device / Pckage
C1	47n	C 0805
C2	nm	C 0805
C12	100n	C_0805
CBO	100u	ELKOSIZEFPANASONIK FK SIZE-F
CBO-1	nm	CPOL-EUE5-5
CBO-2	nm	C 0805
CBO-3	100n	C 0805
CIN-3	nm	C 0805
CIN-4	nm	C 0805
CIN-5	100n	C 0805
CIN-6	100u	ELKOSIZEFPANASONIK FK SIZE-F
CIVCC	1uF 6.3V	ELKOPANASONIC-SP-2
D1	BAS16-03W	DIODE BAS16-03W SOD323
D2	5V1	ZENER-DIODE SOT23
D4	BAS16-03W	DIODE BAS16-03W SOD323
D5	Schottky 3A 50V	SK3010A DIODE DO214AB
DBO1	Schottky 3A 50V	SK3010A DIODE DO214AB
EN/PWMI		PINHD-1X1
FREQ		PINHD-1X1
SET/ST		PINHD-1X1
IC1	TLD5098EL	TLD5058 PG-SSOP-14-1-EP
IN1		AK500/2
OUT		AK500/2
LBO	100uH 3,5A	COILCRAFT MSS1278T-104MLB
R1	1k	R 0805
R2	nm	R 0805
R11	10k	R 0805
RCS	50mR 1%	R 2512
RD1	10k 1%	R 0805
RD2	10k 1%	R 0805
RFB	1R	R 2512
RFREQ	20k 1%	R 0805
RG	10R	R 0805
ROVH	33k2 1%	R 0805
ROVL	1k 1%	R 0805
RST	0R	R 0805
SJ1	closed	SJ
SJ2	closed	SJ
SJ3	closed	SJ
T1	IPG15N06S3L-45	IPG15N06S3L PG-TDSON-8-4
T2	P-MOS_BSP171P	P-MOS_BSP171P SOT223

# APPBOARD TLD5098EL V3 LAYOUT: Top+Silk and Bottom



### Available Appboards

Sales Name of Demoboard	SP Number	Description
APPBOARD TLD5098EL VER1	SP000954242	Constant Voltage Mode
APPBOARD TLD5098EL VER2	SP000954244	Boost to Ground Configuration w/ short to ground protection
APPBOARD TLD5098EL VER3	SP000954246	Boost to Battery Configuration
APPBOARD TLD5098EL VER4	SP000954248	SEPIC Configuration
APPBOARD TLD5098EL V5	SP000984908	Boost to Ground Configuration w/ short to ground protection & EMC filter
APPBOARD TLD5098EL V6	SP000984910	Boost to Battery Configuration with EMC filter
APPBOARD TLD5098EL V7	SP000984912	SEPIC Configuration with EMC filter
BOARD TLD5097 B2B	SP001157588	Boost to Battery Configuration
BOARD TLD5097 B2G	SP001157586	Boost to Ground Configuration
BOARD TLD5097 SEPIC	SP001157590	SEPIC Configuration



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