

# LITIX™ Power APPBOARD TLD5098EL V1 Manual

## Boost to Ground - Voltage Mode

24.11.2017

ATV BP LI

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# LITIX™ Power TLD5098EL - APPBOARD TLD5098EL V1

## Topology: Boost To Ground - Voltage Mode

The APPBOARD TLD5098EL V1 uses the TLD5098D as a Boost to Ground, constant current LED driver

Board Characteristics:

Input Voltage :

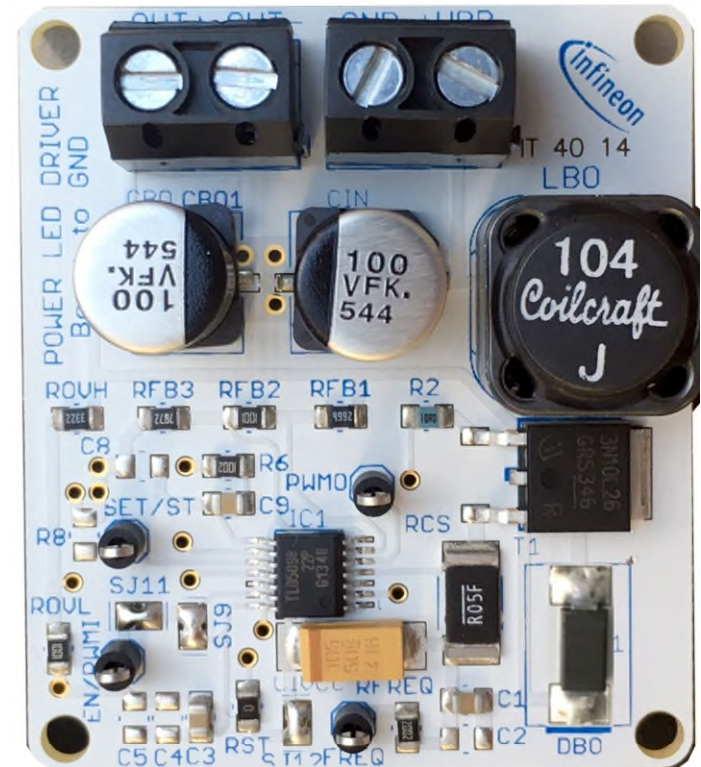
6V – 39V

Output Voltage:

39V (at 100% analog dimming => Vset=5V)

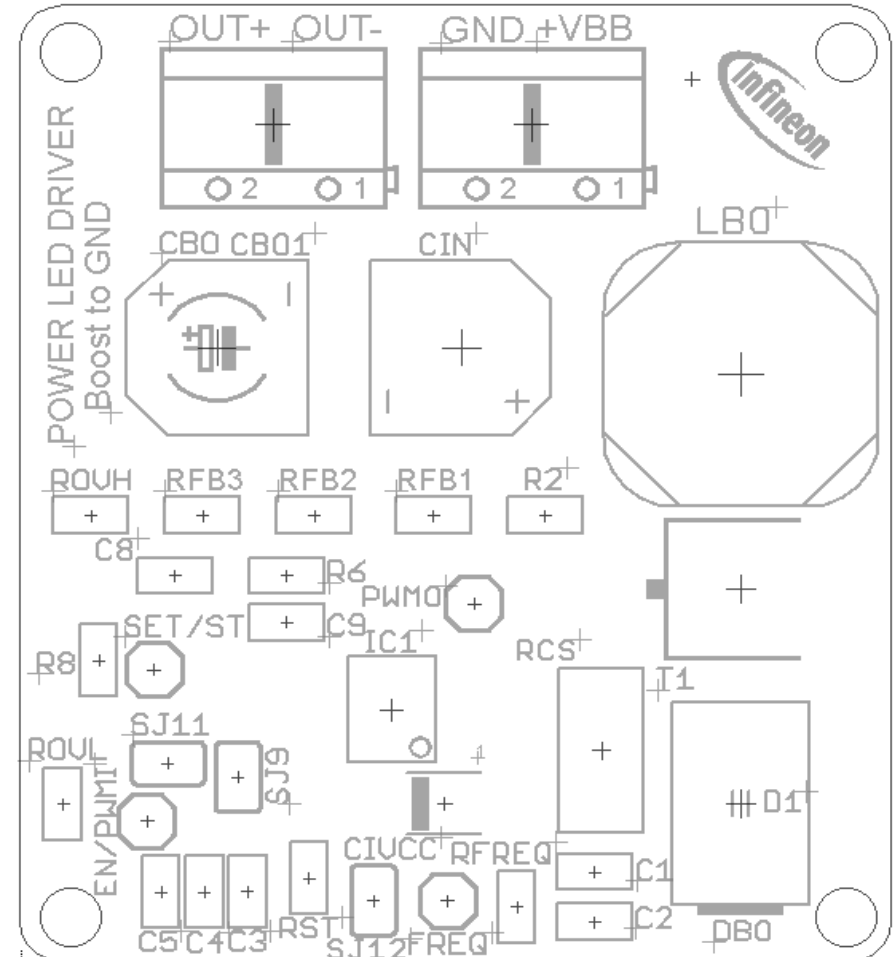
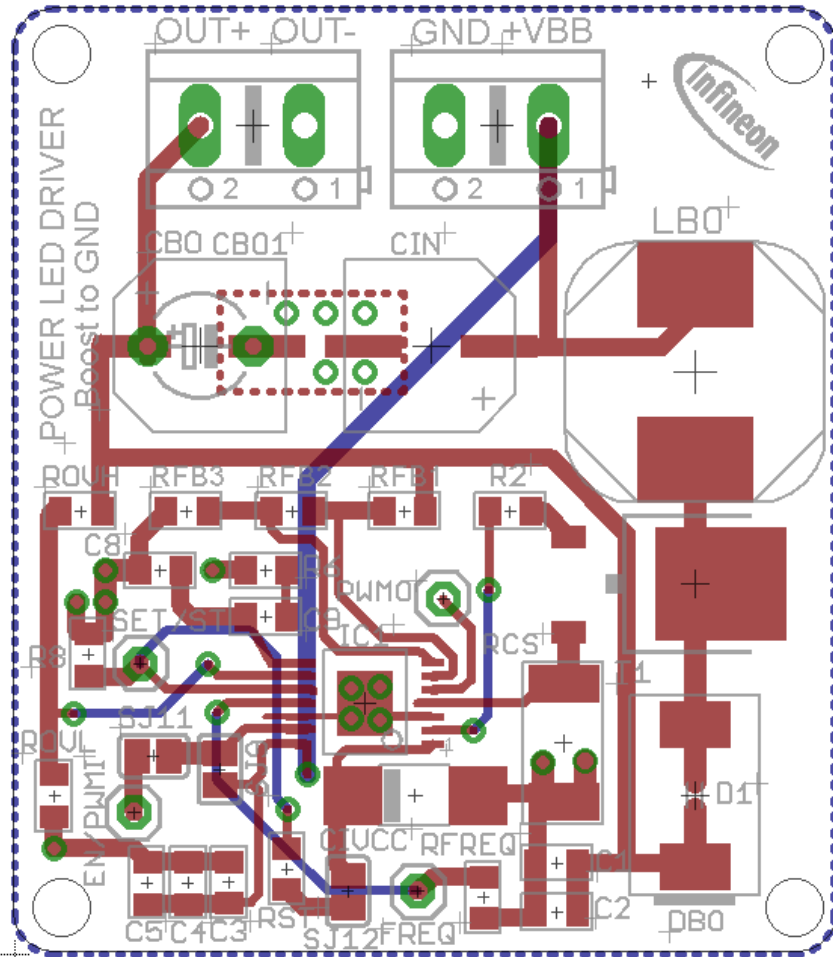
Switching Frequency:

300kHz (Can be changed replacing RFREQ)

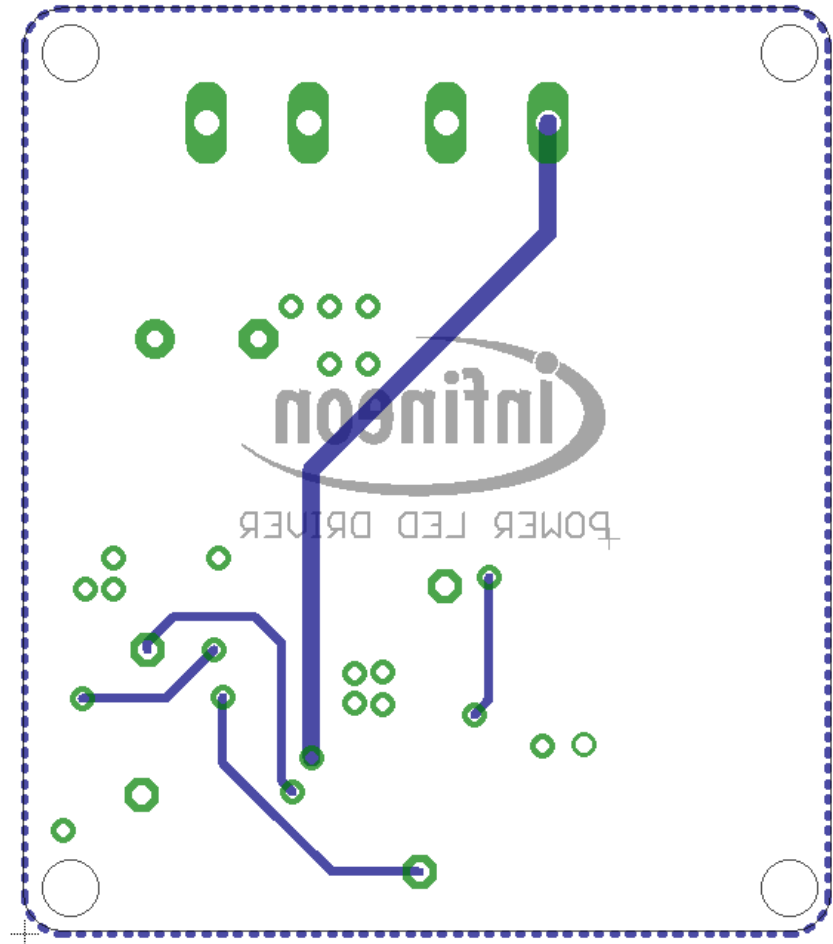
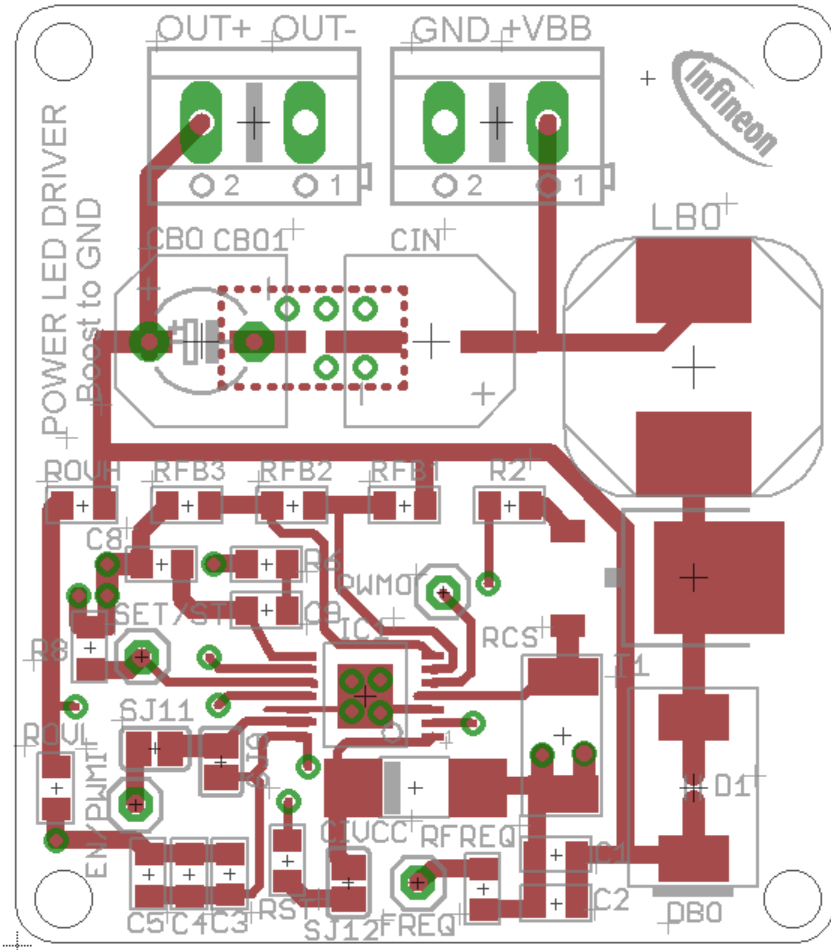




# TLD5098EL - APPBOARD TLD5098EL V1 Layout (TOP and SILK)



# TLD5098EL - APPBOARD TLD5098EL V1 Layout (TOP and BOTTOM)



# TLD5098EL - APPBOARD TLD5098EL V1

## Bill of Material (BOM)



Part	Value	Device / Package
C1	100n	C_0805
C2	nm	C_0805
C3	100n	C_0805
C4	nm	C_0805
C5	nm	C_0805
C8	nm	C_0805
C9	10n	C_0805
CBO	100u	ELKOSIZEFPANASONIK_FK_SIZE-F
CBO1	nm	CPOL-EUE5-5
CIN	100u	ELKOSIZEFPANASONIK_FK_SIZE-F
CIVCC	1uF 6.3V	ELKO PANASONIC-SP-2
D1	nm	DIODE-SC79_INFINEON
DBO	Schottky 3A / 50V	DIODE_DO214AB
IC1	TLD5098EL	TLD5058 PG-SSOP-14-1-EP
LBO	100uH 3,5A	COILCRAFT MSS1278T-104MLB
OUT	AK500/2	
GND..VBAT	AK500/2	
R2	10R	R_0805
R6	10k	R_0805
R8	nm	R_0805
RCS	50mR 1%	R_2512
RFB1	50k	R_0805
RFB2	1k	R_0805
RFB3	79k	R_0805
RFREQ	20k 1%	R_0805
ROVH	33k2 1%	R_0805
ROVL	1k 1%	R_0805
RST	0R	R_0805
SET/ST		PINHD-1X1
PWMO		PINHD-1X1
EN/PWMI		PINHD-1X1
FREQ		PINHD-1X1
SJ9	closed	SJ
SJ11	closed	SJ
SJ12	closed	SJ
T1	IPD35N10S3L-26	NMOSP-TO252-3 P-TO252-3-XX

### 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



<http://www.infineon.com/LITIX-power-appboards>

### Available Demoboards

Sales Name of Demoboard	SP Number	Description
Demoboard TLD5045EJ	SP000924382	Buck mode
Demoboard TLD5095EL Ver1	SP000760364	Boost to GND (default), Sepic & Constant Voltage Mode possible
Demoboard TLD5095EL Ver2	SP000845642	Boost to Battery (default), Constant Voltage Mode possible



[www.infineon.com/litix-power-demoboards](http://www.infineon.com/litix-power-demoboards)

### Other design in support material

- Data Sheets & Application Note
- Simulation Models
- EMC Test Reports
- Excel Calculation Tool for TLD509xEL available on request

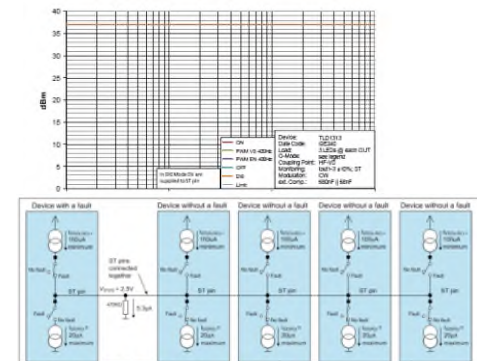
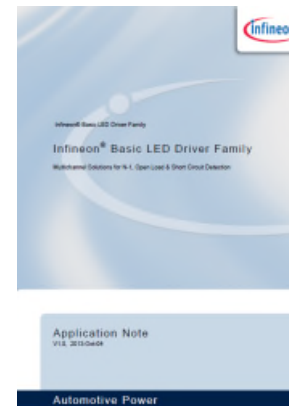


Figure 55 Sharing an ST diagnostic pin between multiple devices





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