

LITIX™ Power APPBOARD TLD5098EL V7 Manual

SEPIC Configuration with EMC filter

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ATV BP LI

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LITIX™ Power TLD5190QV Multifunction Demo

The APPBOARD TLD5098EL V7 uses the TLD5098D as a Sepic (buck boost) constant current LED driver

Board Characteristics:

Input Voltage :

6V - 45V

Output Current Current:

300mA (Can be changed replacing RFB)

Switching Frequency:

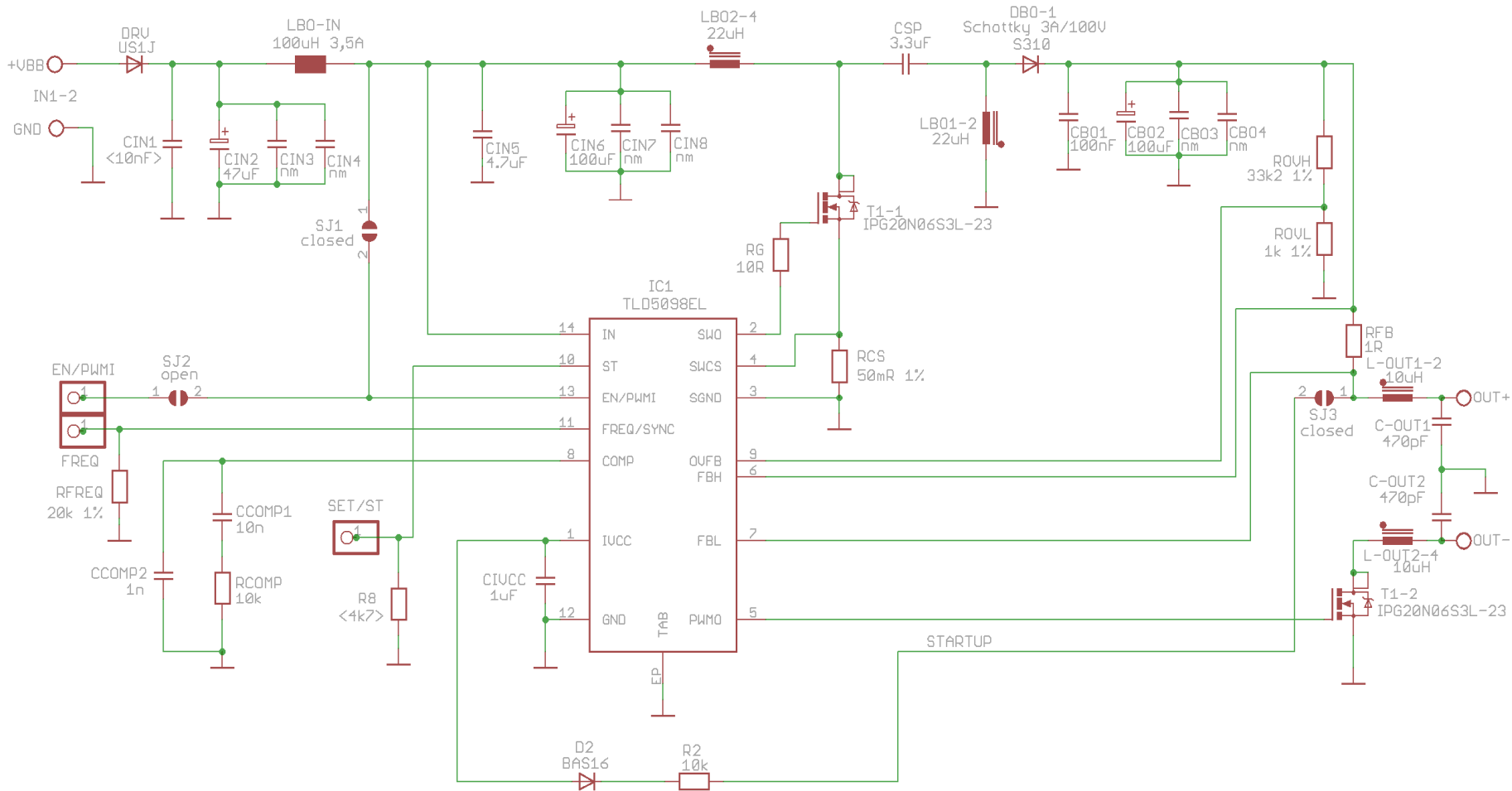
300kHz (Can be changed replacing RFREQ)

Output Voltage :

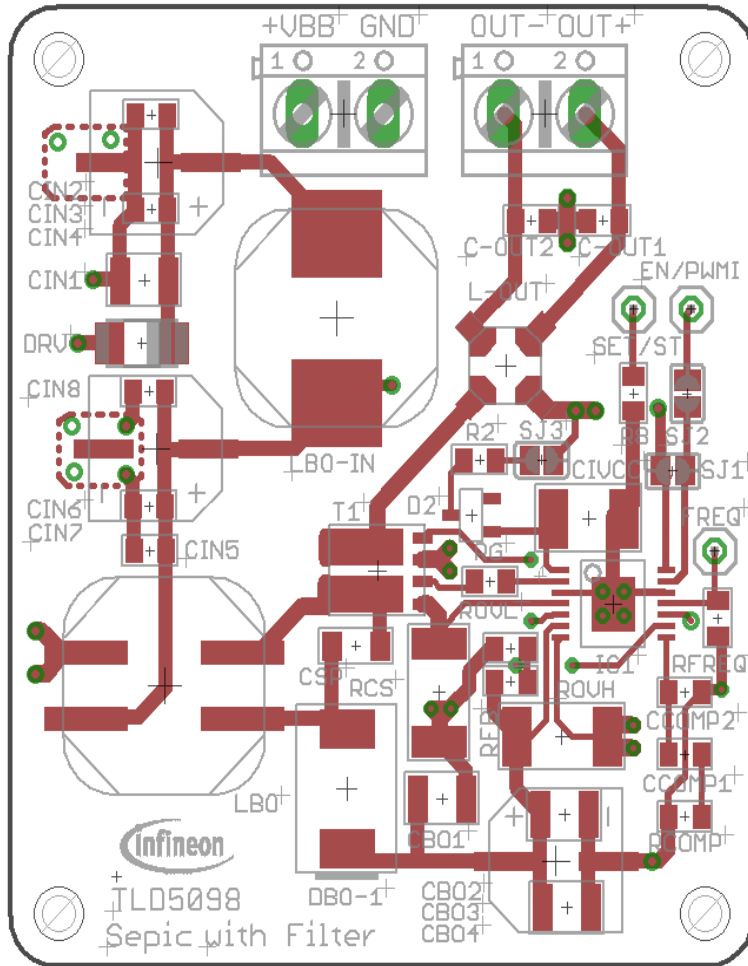
4,5V-40V (Overvoltage Protection can be changed via ROVH/ROVL)



APPBOARD TLD5098EL V7 – Topology: SEPIC SCHEMATIC



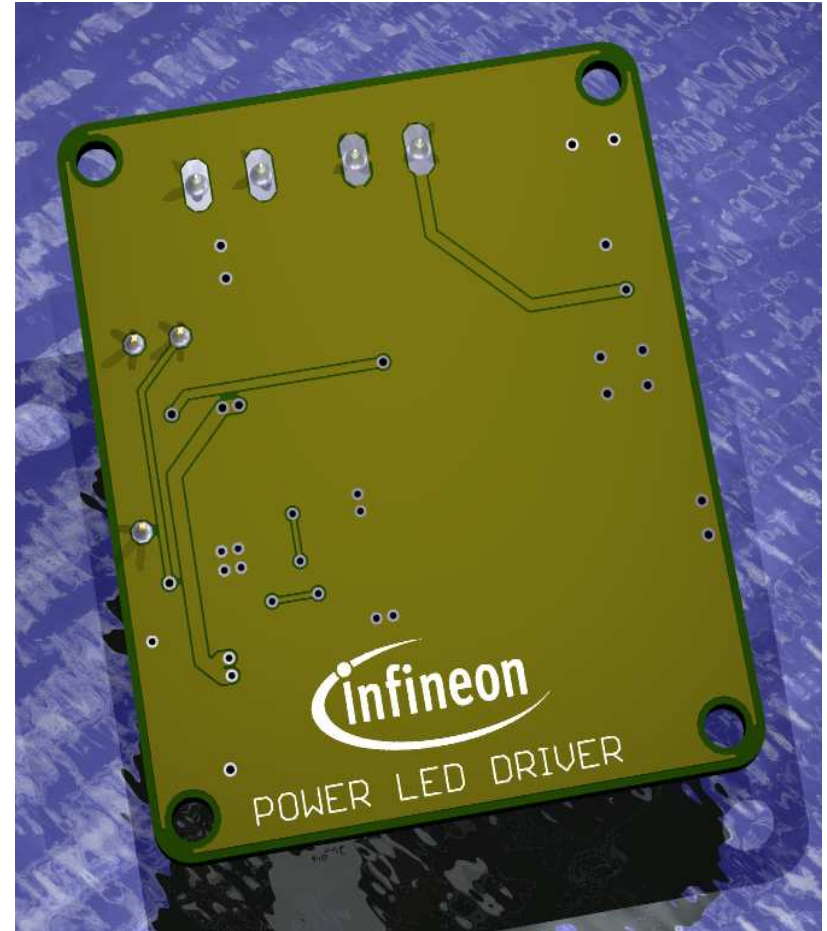
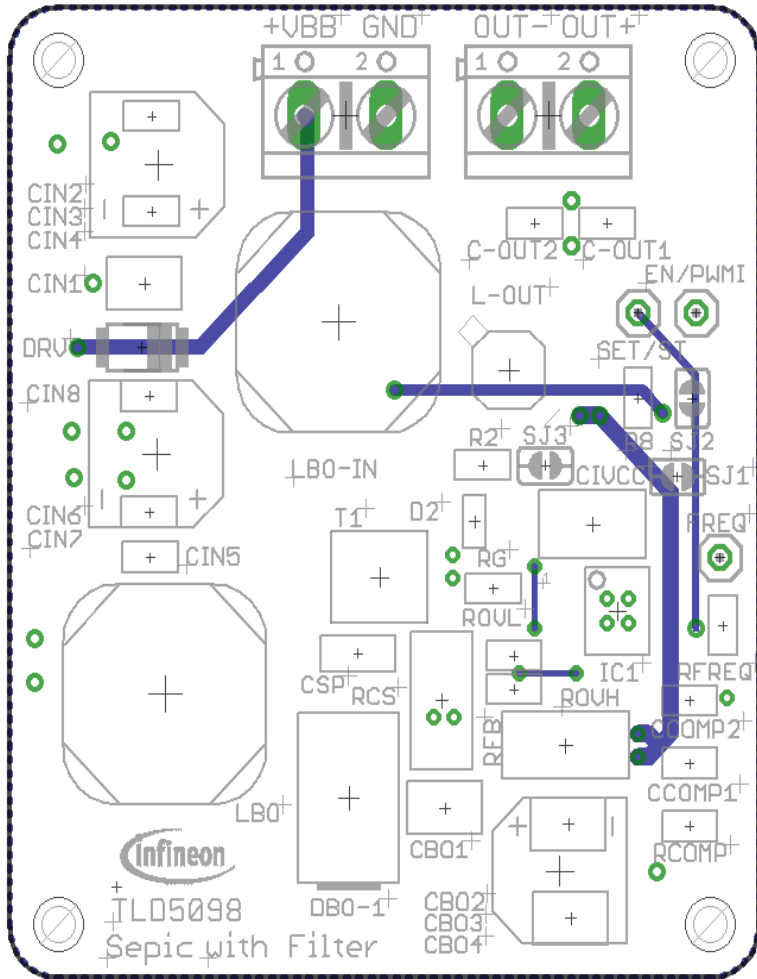
SEPIC configuration – Topology “BUCK / BOOST” Board (TOP)



55mm

46mm

SEPIC configuration – Topology “BUCK / BOOST” Board (BOTTOM)



SEPIC configuration – Topology “BUCK / BOOST”

Bill of Material (BOM)



Part	Value	Package	Device	Quantity
T1	IPG20N06S3L-23	PG-TDSON-8-4	Transistor	1
SJ1, SJ3	closed	Solderjumper	Jumper	2
SJ2	open	Solderjumper	Jumper	1
EN/PWMI , FREQ , SET/ST		Measurement - Point		3
R2, RCOMP	10k	0808	Resistor	2
R8	nm <4,7k>	0805	Resistor	1
RFB	1R	2510	Resistor	1
RCS	50mR 1%	2512	Resistor	1
RFREQ	20k 1%	0808	Resistor	1
RG	10R	0805	Resistor	1
ROVH	33k2 1%	0805	Resistor	1
ROVL	1k 1%	0805	Resistor	1
OUT+, IN1		AK500/2	Connection	2
L-OUT	10uH	LPD4012	Coil	1
LBO	22uH	MSD1278	Coil	1
LBO-IN	100uH / 3,5A	MSS1278	Coil	1
IC1	TLD5098EL	PG-SSOP-14-1-EP	Chip	1
DRV	US1J	DO-214AC	Diode	1
DBO-1	SCHOTTKY 3A 100V	DO-214AB	Diode	1
D2	BAS16	SOT23	Diode	1

SEPIC configuration – Topology “BUCK / BOOST”

Bill of Material (BOM)



C-OUT1, C-OUT2	470pF	0805	Capacitor	2
CBO1	100nF	1210	Capacitor	1
CBO2	100uF	PANASONIK_FK_SIZE-F	Capacitor	1
CBO3, CBO4	nm	1210	Capacitor	2
CCOMP1	10nF	0805	Capacitor	1
CCOMP2	1nF	0805	Capacitor	1
CIN1	nm <10n>	1210	Capacitor	1
CIN2	47uF	PANASONIK_FK_SIZE-F	Capacitor	1
CIN3, CIN4, CIN6, CIN7	nm	0805	Capacitor	4
CIN5	4.7uF	0805	Capacitor	1
CIN8	100uF	PANASONIK_FK_SIZE-F	Capacitor	1
CIVCC	1uF	1812	Capacitor	1
CSP	3,3uF	1206	Capacitor	1
Distance		M3x15mm	Distance	4
Bolt		M3x6mm		4

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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