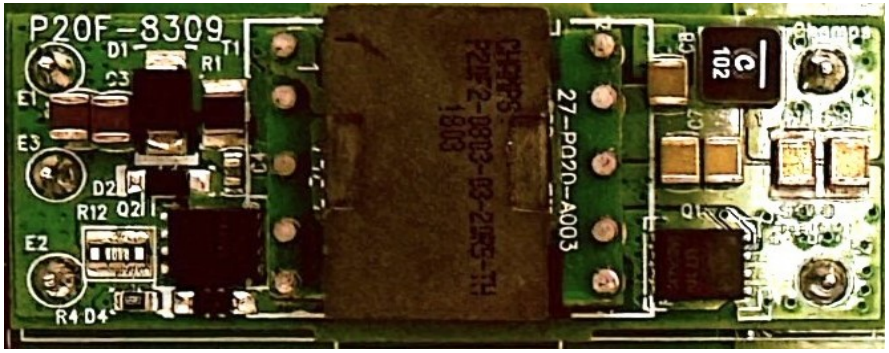
Champs-Tech P20F BM Flyback DC-DC Module & BaseBoard



- Wide Input Voltage [36-72 Vin]
- Low Profile: 12.0mm Height [Defined by Transformer]
- Output Power Typical 3-72W [Defined by Vin]
- Efficiency 92% Typical 94.5% Peak over wide Load.
- Quasi-Resonant Flyback Boundary Mode Topology
- Positive Logic On|Off Control option
- Low Output Ripple & Noise
- RoHS & REACH Compliant
- Temperature Range: -40C to +85C
- Output Power capability is optimized by transformer turns ratios. Multiple transformers available with turns ratios 20:1
- Champs-Tech will provide a completed DC-DC module based on this or modified design in any package desired. Contact Us.

CHAMPS Technology

P20F Series DC-DC Power Module & BaseBoard
Isolated Boundary Mode Flyback Converter

Summary Performance Characteristics

Champs PN	Input Voltage	Output Voltage	Output Current	Output Power	Efficiency %	Mode	Dimension (mm)
P20F1-0803-03-20R5	36-72 Vin	12 Vout	5.0 A	60 W	87.0 – 94.5	BM	22.86 x 58.42 x 12

Notes:

1. Contact factory for additional options and complete ordering part numbers.
2. All specifications are at nominal line voltage and full load, +25 °C. Unless otherwise noted.
3. See detailed specifications below for maximum conditions.
4. There is no warranty implied or otherwise. Additionally, it is not appropriate to assume terms or other conditions that are not expressly addressed and confirmed by written agreement with Champs-Tech prior to use and evaluation. Such terms include matters such as warranties, product liability, intellectual property, or any other possible term or condition that is not explicitly addressed prior to use.

P20F BM Flyback DC-DC Module Catalog

Description:

1. Champs-Tech Main Module contains the planar transformer and incorporated power components to complete a high efficiency, robust, low component count and low-cost DC-DC converter. It is intended to be supplied with a companion Base-Board in order to facilitate evaluation. Additional filtering and protection circuit and components may be added.

2. Champs-Tech will build the module for any customer in any mechanical configuration that works best for the customer embedded or discrete open or encapsulated.

3. Champs-Tech will supply the planar transformer.

4. Champs-Tech will configure any possible options

Input Voltage Range

Output Voltage Single or Multiple.

Output Power

Discrete planar turns ratios and size.

5. Integer Turns available from 1T to 20T. Can be used as Primary or Secondary. Mechanical configuration and outline allow for a flex arrangement. Contact factory for information on any power topology design.

6. All designs can be supplied with planar windings embedded in the pcb of the Main Module of the converter. Heat Sink and installed power components SM assembly and installation and incorporation into a module are also available.

7. The heart of the circuit is the LT3748 IC and extreme low-leakage inductance planar magnetics which maximizes the power capability of an external MOSFET switch while ensuring optimum efficiency. The output

voltage is sampled from the reflected flyback waveform at the Vds node and is programmed with 1 resistor, so it doesnt require an opto-isolator for regulation.

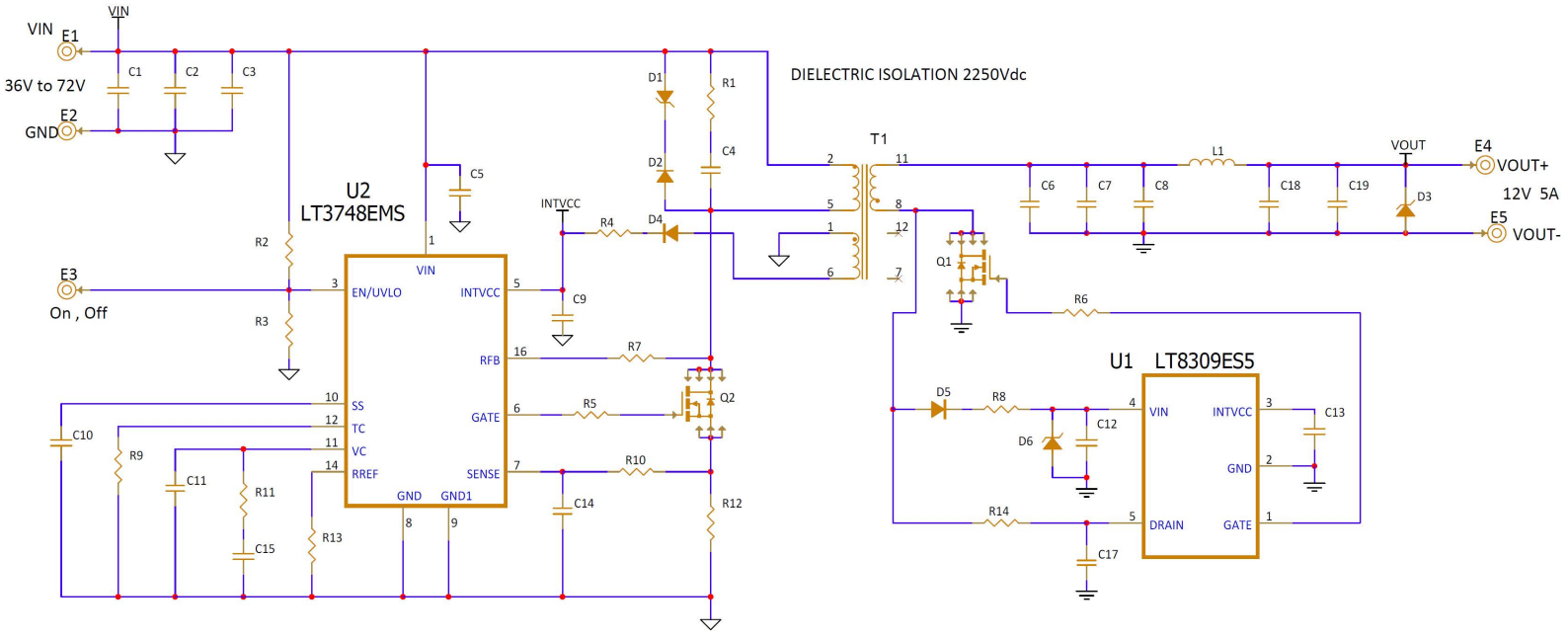
8. The converter offers features based on the LT3748 function and features inherent to the IC: - positive logic (Remote on/off), over current, over temperature & under voltage protection.

9. Additional features of the LT3748 and circuit provide input under voltage lockout. The unit will shut down when the input voltage drops below the threshold programmed.

10.Modules provide voltage isolation from input to output of up to 2250Vdc & can operate over the ambient Temperature Range from -40C to +85C.

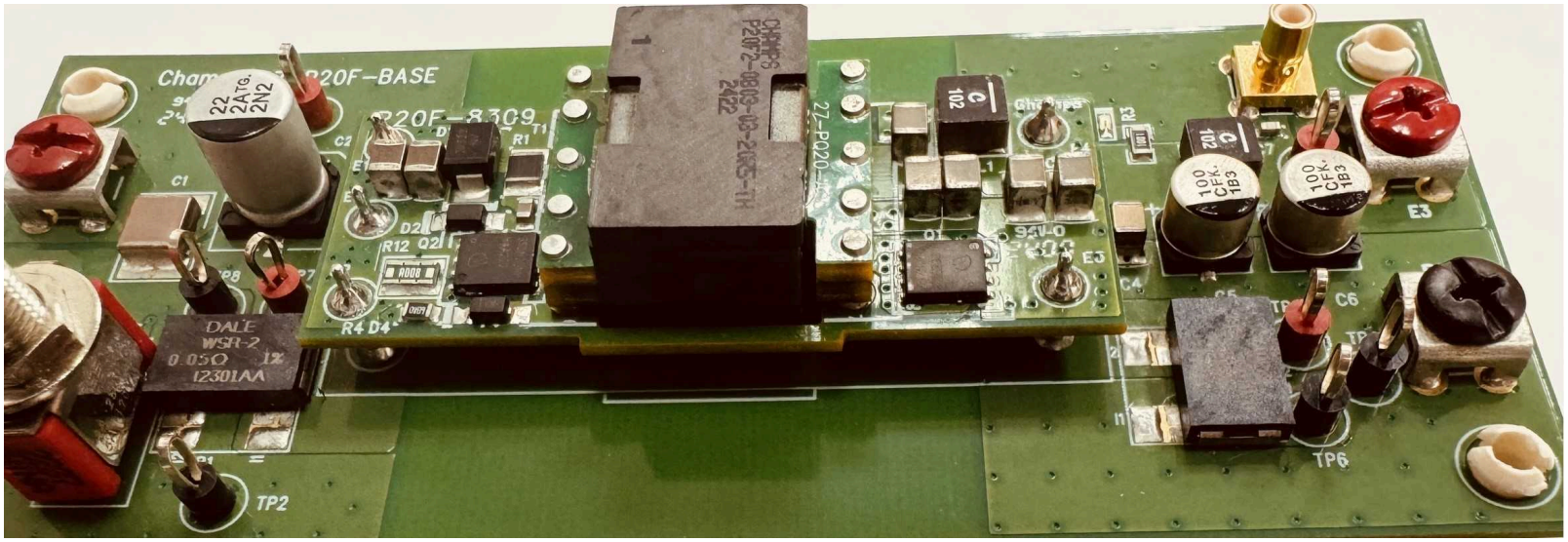
LT3748 Product Page

http://www.analog.com/en/products/power-management/switching-regulators/flyback-forward-isolated-controllers/lt3748.html#product-overview

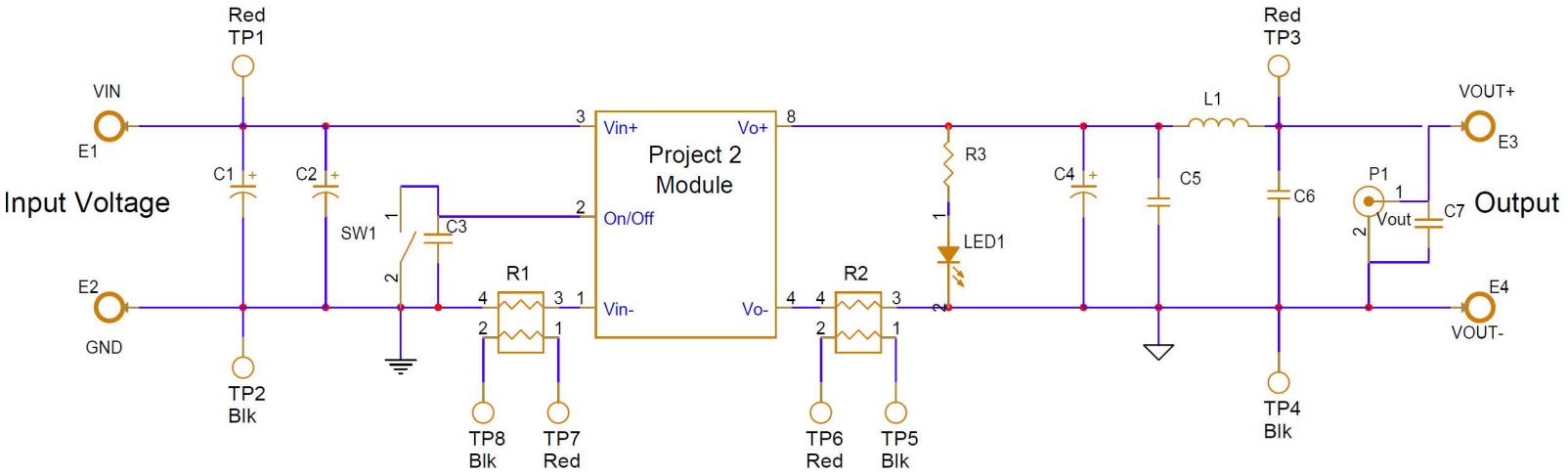


1. T1 | P20F2-0803-20R5-TH | 36-72Vin | 12Vout 60W

P20F 12 Volt Schematic - LT3748



BaseBoard with P20F Module Installed



BaseBoard Schematic