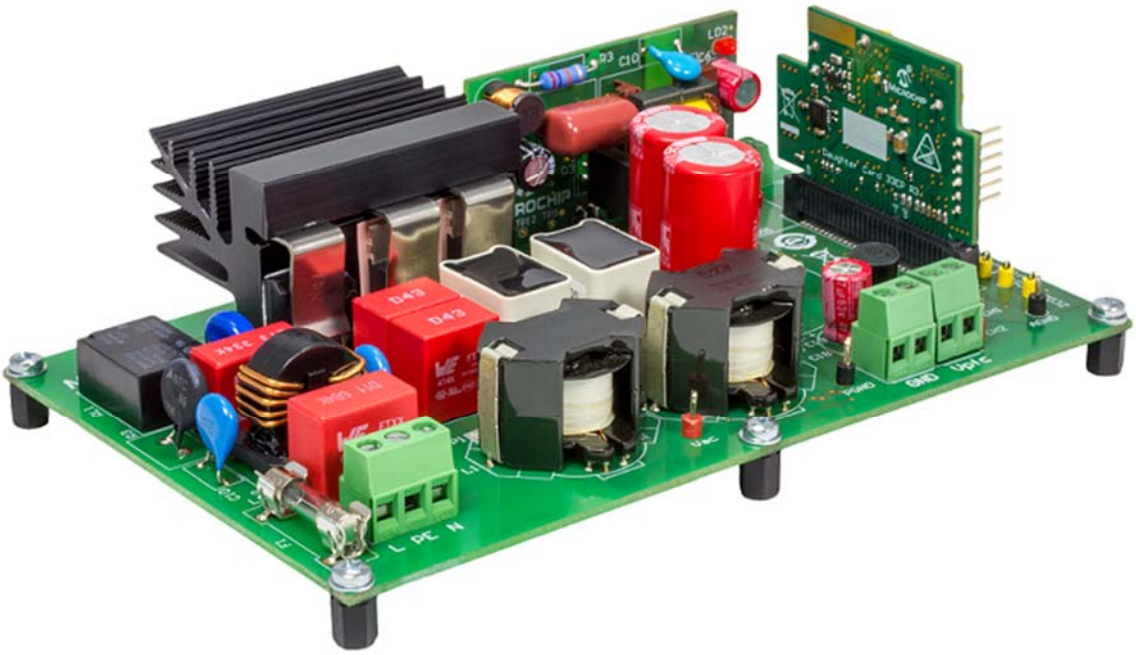


# Low Voltage PFC Development Kit

## Part Number: DV330101

## Summary

Low Voltage Power Factor Correction (LVPFC) Development Kit offers safe voltage levels at moderate power while designing algorithms on a boost power factor correction topology. These algorithms can be applied on real systems under development with minimal changes. The LVPFC Development Board utilizes the dsPIC33EP128GS806 device, supporting full digital and advanced power control algorithm schemes.

### Package Contents

- Low Voltage PFC Development Board
- Digital Power Plug-In Module (DP PIM)

# Product Features

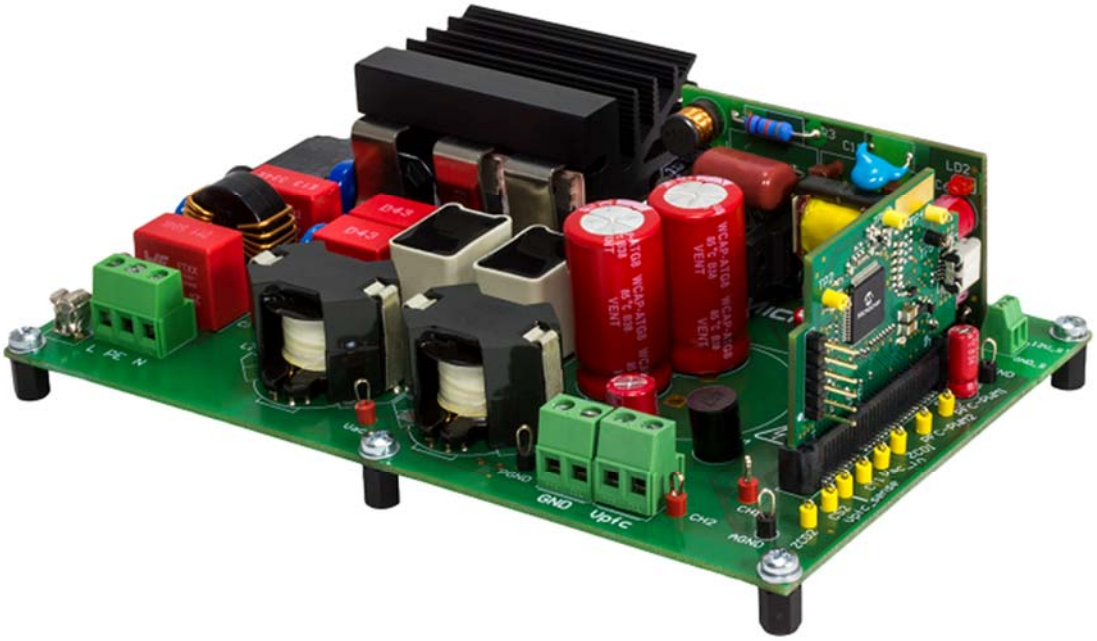
The LVPFC Development Board is based on conventional Interleaved Boost Power Factor Correction (PFC) topology. The hardware supports 24 VAC input but the PCB has been designed following high-voltage design rules. With some modifications, the board can support universal offline voltage range 80 VAC to 260 VAC up to 200W output power

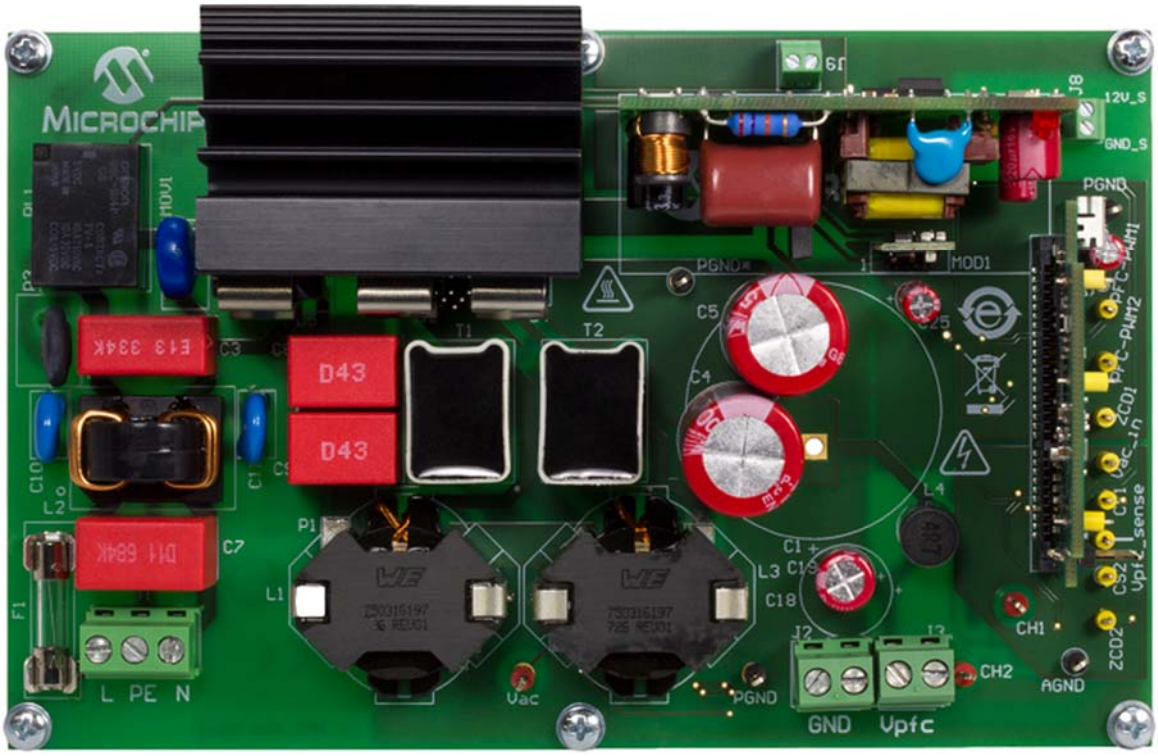
The main blocks of the LVPFC Development Board are:

- EMI/EMC Filter at the input (capable of high voltage)
- Bridge Rectifier (3Amax, capable of high voltage)
- Phase 1 (MOSFET, Current Transformer, Diode rectifier)
- Phase 2 (MOSFET, Current Transformer, Diode rectifier)
- Ultra-Wide Voltage Range (UWVR) 5W Flyback (capable of low and high voltage); It is providing 12V primary, non-galvanic isolated and 12V secondary, 4 kV galvanic isolated voltage

The LVPFC Development Board supports:

- Single-Phase or Dual-Phase Operation mode
- Discontinuous, Transition, Continuous Current mode of operation
- Input AC Voltage, Output DC voltage: resistive voltage divider sense
- Current Sense in each power switch leg: current transformers
- Zero Cross Detection (ZCD): auxiliary winding placed at storage chokes
- Inrush Current Limiter: Negative Temperature Coefficient (NTC) resistor and relay
- Output Overvoltage Protection (OVP): analog comparator with hysteresis, disabling gate drivers. Power reset (unplug the power) is needed to reset that comparator
- Mating Socket for DP PIM Board




https://www.microchip.com/developmenttools/ProductDetails/DV330101 11-23-18