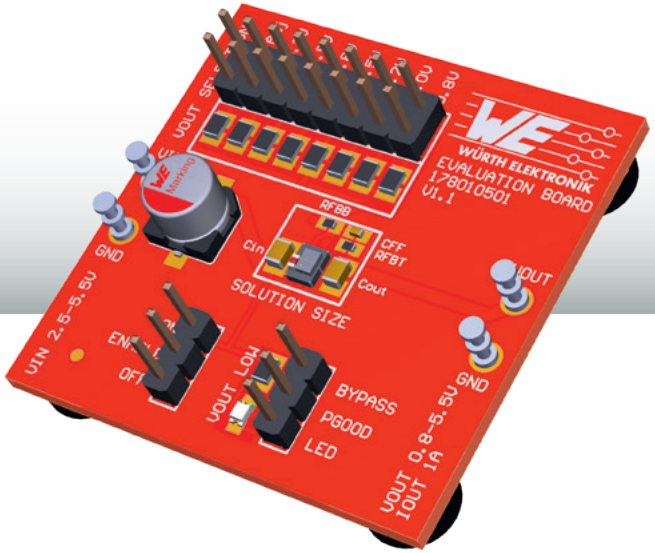
WÜRTH ELEKTRONIK

Quick Start Guide

Magl³C Power Module Evaluation Board
for 171010501 LGA6-EP



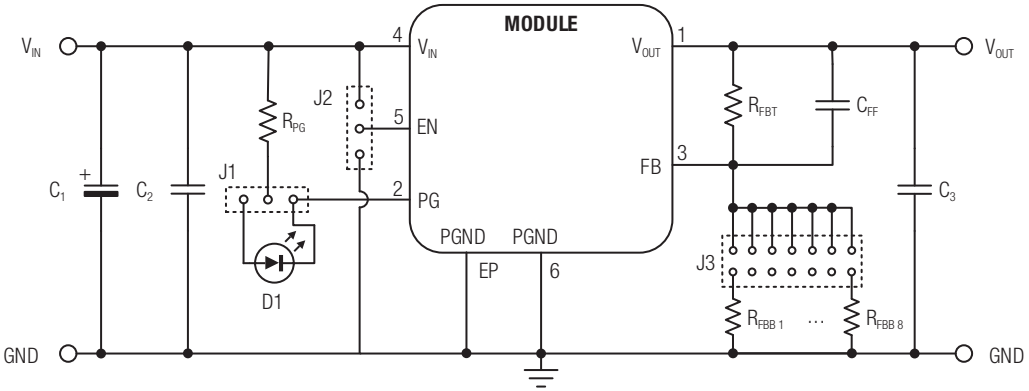
Evaluation Board
178010501

Version 1.1

⚠ WARNING! – Before operating read the attached IMPORTANT NOTICE document!

Schematic

Features



The additional aluminum polymer capacitor C_1 is only for evaluation board protection purposes. It is mounted at the termination of the supply line and provides slight damping of possible oscillations of the series resonance circuit represented by the inductance of the supply line and the input capacitance. It is not essential for operation.

For accurate V_{IN} and V_{OUT} voltage measurements it is recommended to measure directly at the input and output capacitors C_2 and C_3.

It is **not** recommended to use this evaluation board with input and output wire lengths longer than 1 m.

For the datasheet of the power module visit us at:
https://katalog.we-online.de/de/pm/MAGIC-VDMM

This product is highly sensitive to electrostatic discharge (ESD). As such, always use proper ESD precautions when handling. Failing to follow the aforementioned recommendations can result in severe damage to the part.

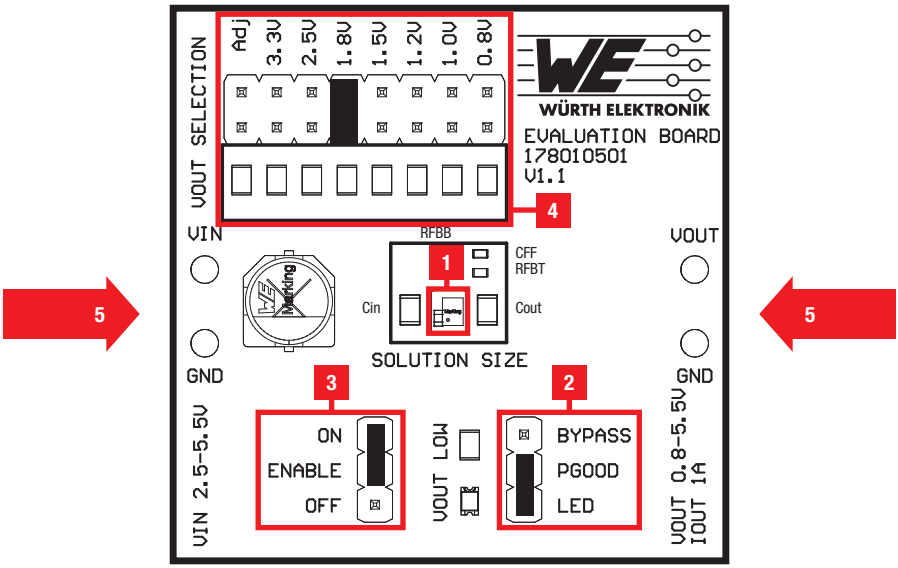
WARNING! – Before operating read the attached IMPORTANT NOTICE document!

Ref.Des.	Description (Order Code)	
IC1	MagI³C MicroModule (171010501)	
C_1	Aluminum polymer capacitor 220 µF/10 V (875105244013)	
C_2	Ceramic chip capacitor 4.7 µF/25 V X5R, 0805 (885012107018)	
C_3	Ceramic chip capacitor 10 µF/16 V X5R, 0805 (885012107014)	
	Ceramic chip capacitor 10 µF/10 V X5R, 0805* (885012107010)	
C_{FF}	Ceramic chip capacitor 22 pF/25 V NP0/C0G 0402 (885012005009)	
R_{FBT}	24.9 kΩ	
R_{FBB}	Set by jumper	Open for V_{OUT} = 0.8 V
		97.6 kΩ for V_{OUT} = 1.0 V
		48.7 kΩ for V_{OUT} = 1.2 V
		28 kΩ for V_{OUT} = 1.5 V
		19.6 kΩ for V_{OUT} = 1.8 V (default setting)
		11.5 kΩ for V_{OUT} = 2.5 V
		7.87 kΩ for V_{OUT} = 3.3 V
		To be soldered for adjustable output voltage $R_{FBB} = \frac{R_{FBT}}{\frac{V_{OUT}}{V_{FB}} - 1}$
R_{PG}	Pull-up resistor for PG pin 1.1 kΩ	
D1	SMD Chip LED 0805, Red, 2 V_F (150080RS75000)	
J1	Jumper to enable PG diode (150080RS75000) or connect pull-up direct to PG pin (61300311121)	
J2	Jumper for EN connection to either V_{IN} (device enabled) or GND (device disabled) (61300311121)	
J3	Jumper for output voltage selection. Only one resistor should be selected at a time (61301621121)	

* alternative recommended part

For layout, Gerber and STP files visit us on:
www.we-online.com/magic-vdmm

Overview



Description

V_{IN} 2.5 – 5.5 V **V_{OUT}** 0.8 – 5.5 V **I_{OUT}** 1.0 A

1 VDMM Variable Step Down MicroModule LGA6-EP

2 Jumpers (J1) for selection Bypass and LED

3 Jumpers (J2) for ENABLE & shut off the Module

4 Jumpers to set predefined output voltage V_{OUT}

5 Test clip connection pins for V_{IN} and V_{OUT}

■ Default jumper position

Absolute maximum ratings

Caution: Exceeding the listed values may affect the device negatively and may cause permanent damage.

This evaluation board is intended to be operated in a research and development environment under the supervision of qualified technicians and engineers who are trained and experienced in the safe use of electronics. This evaluation board was designed and tested according to CISPR32 Class B standards under Würth Elektronik laboratory test conditions, as indicated in the data sheet of the corresponding power module. Operation in other test setups may cause unintended electrical behavior and exceed the stated performance and limits imposed by the CISPR32 Class B standards. This evaluation board is not intended for usage in final applications. This evaluation board is not intended for resale.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Power Management IC Development Tools ***category:***

Click to view products by Wurth ***manufacturer:***

Other Similar products are found below :

EVAL-ADM1168LQEBZ EVB-EP5348UI MIC23451-AAAYFL EV MIC5281YMME EV DA9063-EVAL ADP122-3.3-EVALZ ADP130-0.8-EVALZ ADP130-1.2-EVALZ ADP130-1.5-EVALZ ADP130-1.8-EVALZ ADP1714-3.3-EVALZ ADP1716-2.5-EVALZ ADP1740-1.5-EVALZ ADP1752-1.5-EVALZ ADP1828LC-EVALZ ADP1870-0.3-EVALZ ADP1871-0.6-EVALZ ADP1873-0.6-EVALZ ADP1874-0.3-EVALZ ADP1882-1.0-EVALZ ADP199CB-EVALZ ADP2102-1.25-EVALZ ADP2102-1.875EVALZ ADP2102-1.8-EVALZ ADP2102-2-EVALZ ADP2102-3-EVALZ ADP2102-4-EVALZ ADP2106-1.8-EVALZ ADP2147CB-110EVALZ AS3606-DB BQ24010EVM BQ24075TEVM BQ24155EVM BQ24157EVM-697 BQ24160EVM-742 BQ24296MEVM-655 BQ25010EVM BQ3055EVM NCV891330PD50GEVB ISLUSBI2CKIT1Z LM2744EVAL LM2854EVAL LM3658SD-AEV/NOPB LM3658SDEV/NOPB LM3691TL-1.8EV/NOPB LM4510SDEV/NOPB LM5033SD-EVAL LP38512TS-1.8EV EVAL-ADM1186-1MBZ EVAL-ADM1186-2MBZ