WÜRTH ELEKTRONIK

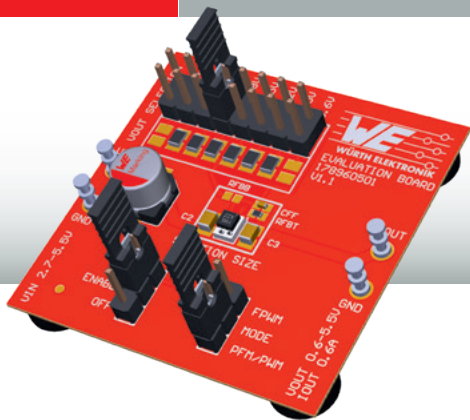# Quick Start Guide

MagI³C Power Module Evaluation Board
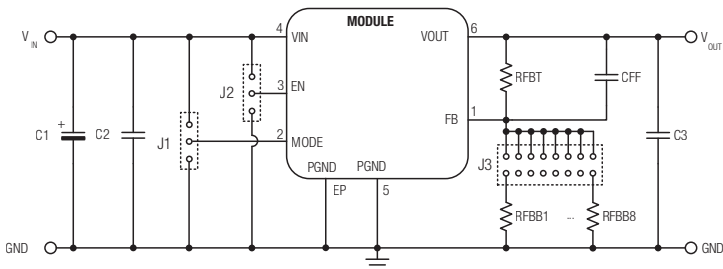for 171960501 LGA6-EP

**Evaluation Board
178960501**

Version 1.1

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

Schematic

EN55032 CLASS B | V_OUT ± FIX SS | FIX FREQ. | UVLO | OCP | OTP | T_a85°C

The additional aluminum polymer capacitor C1 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 C2 and C3.

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.

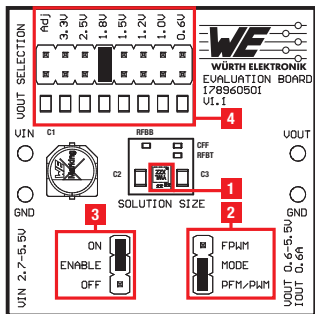⚠ WARNING! – Before operating read the attached IMPORTANT NOTICE document!

WÜRTH ELEKTRONIK

Ref.Des.	Description (Order Code)		
U1	MagI³C MicroModule (171960501)		
C1	Aluminum polymer capacitor 220 µF/10 V (875105244013)		
C2	Ceramic chip capacitor 10 µF/16 V X5R, 0805 (885012107014)		
C3	Ceramic chip capacitor 10 µF/16 V X5R, 0805 (885012107014)		
CFF	Ceramic chip capacitor 22 pF/10 V NP0/COG 0402 (885012005009)		
RFBT	24.9 kΩ		
RFBB	Set by jumper	Open for V_{OUT} = 0.6 V	
		36.5 kΩ for V_{OUT} = 1.0 V	
		24.9 kΩ for V_{OUT} = 1.2 V	
		16.5 kΩ for V_{OUT} = 1.5 V	
		12.4 kΩ for V_{OUT} = 1.8 V (default setting)	
		7.68 kΩ for V_{OUT} = 2.5 V	
		5.36 kΩ for V_{OUT} = 3.3 V	
		To be soldered for adjustable output voltage	$R_{FBB} = \dfrac{R_{FBT}}{\dfrac{V_{OUT}}{V_{FB}} - 1}$
J1	Jumper for MODE connection to either V_{IN} (forced PWM) or GND (PFM/PWM) (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)		

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

Overview

WÜRTH ELEKTRONIK

Description

V_{IN} 2.7 – 5.5 V

V_{OUT} 0.6 – 5.5 V

I_{OUT} 0.6 A

1 VDMM Variable Step Down MicroModule LGA6-EP

2 Jumpers (J1) for selection between forced PWM & PFM/PWM

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 abs. max. values given in the datasheet 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