

WÜRTH ELEKTRONIK
MORE THAN YOU EXPECT



QUICK START GUIDE

**Mag1°C Power Module Evaluation
Board for 1710X1801 LGA-16EP**

Evaluation Board 1780X1801

Version 1.3

SCHEMATIC

Features



EN55032
Class B



FIX SS



Fix Freq.



UVLO



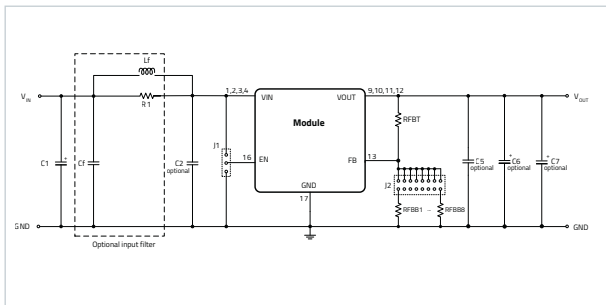
OCP



OTP



T_j 85°C



The additional aluminum electrolytic 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 test pins placed beside the input and output capacitors C2 and C5. 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://www.we-online.com/catalog/en/MAGIC-VDLM>



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!

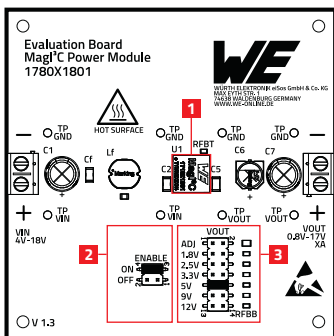
Ref. Des.	Description Order Code
U1	MagI ³ C Power Module (1710x1801)
C1	Aluminum electrolytic capacitor 220μF/25V (860020474012)
C2	Ceramic chip capacitor (optional)
C3	Ceramic chip capacitor (optional)
C5	Ceramic chip capacitor (optional)
C6	Aluminum Electrolytic Capacitor 100μF/16V (865080343009)
C7	Through hole electrolytic (optional)
Cf	Ceramic chip capacitor 10μF/25VX5R, 1206 (optional) (885012108021)
Lf	Filter inductor, 10μH, PD2 (optional) (74477510)
RFBT	10 kΩ

Ref. Des.	Description Order Code
RFBB	715 Ω for V _{OUT} = 12 V
	976 Ω for V _{OUT} = 9 V
	1.87 kΩ for V _{OUT} = 5 V (default setting)
	3.16 kΩ for V _{OUT} = 3.3 V
	4.64 kΩ for V _{OUT} = 2.5 V
	7.87 kΩ for V _{OUT} = 1.8 V
	To be soldered for adjustable output voltage
	$R_{FBB} = \frac{R_{FBT} \cdot 0.8 V}{V_{OUT} - 0.8 V}$
J1	Jumper for EN connection to either VIN (device enabled) or GND (device disabled) (61300311121)
J2	Jumper for output voltage selection. Only one resistor should be selected at a time (61301621121)

For Layout, Gerber and Step files visit us on www.we-online.com/catalog/en/MAGIC-VDLM



OVERVIEW



■ Default jumper position

Description

V_{IN} 4 – 18V
 V_{OUT} 0.8 – 17V
 I_{OUT} 1A/2A/3A

- 1 VDRM Variable Step Down Regulator Module LGA16-EP
- 2 Jumpers (J1) for ENABLE & shut off the Module
- 3 Jumpers to set predefined output voltage V_{OUT}
- 4 Terminal block screw connectors for V_{IN} and V_{OUT}

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.

