

WÜRTH ELEKTRONIK
MORE THAN YOU EXPECT



QUICK START GUIDE

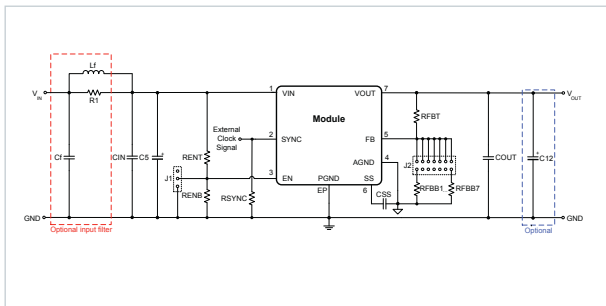
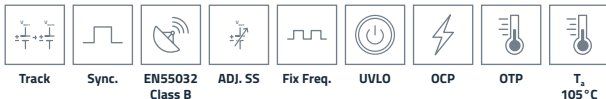
**Mag1°C Power Module Evaluation
Board for 171050601 TO263-7EP**

Evaluation Board 178050601

Version 3.3

SCHEMATIC

Features



The additional aluminium 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. To use an external clock signal desolder the R_{SYNC} resistor and connect the clock signal directly to the "EXT. CLOCK" test pin.

For accurate V_{IN} and V_{OUT} voltage measurements it is recommended to measure directly at the input and output capacitors C_{IN} and C_{OUT} . 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: www.we-online.com/catalog/en/magic-vdrm



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!

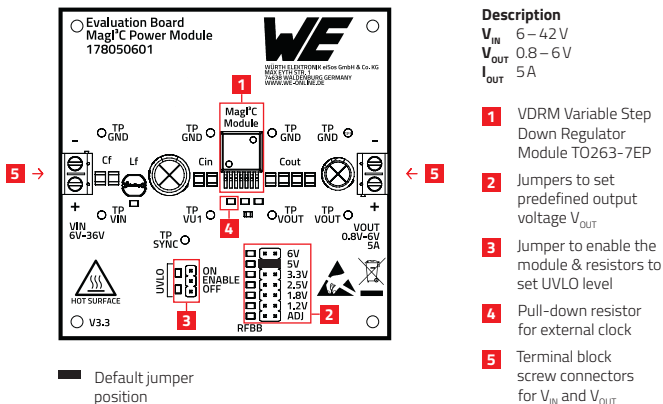
Ref. Des.	Description Order Code
U1	MagI ³ C Power Module (171050601)
C5	Aluminum electrolytic capacitor 220µF/50V (860160675026)
CIN	2 x Ceramic chip capacitor 4.7µF/50V (885012209048)
CSS	Ceramic chip capacitor 4.7nF/50V (885012209048)
COUT	4 x Ceramic chip capacitor 4.7µF/50V (885012209048)
C12	Aluminum electrolytic capacitor (optional)
Cf	2 x Ceramic chip capacitor 4.7µF/50V (optional) (885012209048)
Lf	Filter inductor, 6.8µH, WE-PD2 (optional)
R1	0 Ω resistor bridge
RENT	not mounted
RENB	not mounted
RSYNC	1.5 kΩ
RFBT	10 kΩ
J1	Jumper for enabling the module. (609002115121)
J2	Jumper for output voltage selection. Only one resistor should be selected at a time (609002115121)

Ref. Des.	Description Order Code
RFBB	Set by jumper
	1.54 kΩ for V _{OUT} = 6 V
	1.91 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
	19.6 kΩ for V _{OUT} = 1.2 V
To be soldered for adjustable output voltage	
$R_{FBB} = \frac{R_{FBT} \cdot 0.8V}{V_{OUT} - 0.8V}$	

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



OVERVIEW



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.

