

Würth Elektronik eiSos GmbH & Co. KG

EMC & Inductive Solutions

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Product / Process Change Notification (PCN)

- Major change
 Minor change

PCN #:	PCN_FDSM_20190826	Change Category:	<input type="checkbox"/> Equipment / Location
Affected Series:	WE-FDSM; 173950378; 173950578		<input checked="" type="checkbox"/> General Data
PCN Date:	July 25, 2019		<input type="checkbox"/> Material
Effective Date:	August 26, 2019		<input type="checkbox"/> Process
			<input type="checkbox"/> Product Design
			<input type="checkbox"/> Shipping / Packaging
			<input type="checkbox"/> Supplier

Contact:	Product Management	Data Sheet Change:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Phone:	+49 (0) 7942 - 945 5001			
Fax:	+49 (0) 7942 - 945 5179	Attachment:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
E-Mail:	pcn.eisos@we-online.com			

DESCRIPTION AND PURPOSE OF CHANGE:

In the continuous process of offering more value to our customers, Würth Elektronik has enlarged the technical content of the MagI³C power module 173950378 & 173950578 (SIP-3 28V_{IN} 3.3V / 5V_{OUT} 0.5A) datasheet significantly.

Update datasheet revision to 2.0.

In addition some electrical specifications are provided in a more precise way (see below).

There will be no change in form, fit, quality or reliability of the product.

DETAIL OF CHANGE:

ELECTRICAL SPECIFICATIONS

- Absolute maximum voltage for output pin has been added (min. -0.6V; max. 30V)
- Case-to-ambient thermal resistance added (70K/W)
- Maximum case temperature added (100°C)
- Junction temperature at which thermal shutdown occurs has been added (T_{SD} = 165°C)
- Typical values for output voltage ripple has been added (typ. 10mVpp)
- Efficiency measurements with min. and max. input voltage has been added
- Some symbols changed: I_Q replaced by I_{IN}, V_{IN} for absolute maximum ratings replaced by V_{IN}, T_{ST} replaced by T_{storage}, C_{LOADMAX} has been replaced by C_{OUT MAX}
- Symbols added: I_{CL} for Current limit threshold
- Symbols removed: ΔV_{OUT} / ΔV_{IN}: Line regulation, ΔV_{OUT} / ΔI_{OUT}: Load regulation

This has no impact on existing designs. No changes of the application circuitry have to be applied.

No further amendments in the electrical specifications have been done.

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Additional information has been included in the datasheet:

- Bookmarks have been activated for quick chapter navigation
- Package bottom view has been added
- Marking description has been added
- Features section has been updated for a better overview of the features at a glance
- Typical circuit diagram has been updated
- Ordering information of related family members has been added
- Information about pin compatible family members has been added
- In the sales contact section: Changed web link to www.we-online.com/powermodules and added descriptor "Technical Support:" in front of powermodules@we-online.de
- Electrical specifications table has been structured in sections in order to improve readability
- RoHS, REACH section has been added
- Package specification section has been added
- All electrical performance curves have been measured with higher resolution and presented with improved readability
- Section typical performance curves: Updated EMI standard from EN55022 to EN55032. Updated limit lines to full anechoic room measurement
- EMI test result (conducted and radiated) have been added with two different test conditions (short and long wire)
- Power dissipation diagrams has been added
- Line and load regulation diagrams have been added
- Block diagram rearranged for better readability
- Output voltage ripple diagrams has been updated for better readability
- Effect of soft-start is shown
- Light load operation description has been added with inductor current diagrams
- Overvoltage protection, overcurrent protection, short circuit protection and over temperature protection are described in detail and graphs has been added
- EVAL board description has been extended with an explanation of the circuit, operational instructions and bill of material
- EMI Filter design section with two different test condition has been added
- Application section (generating negative output and complementary voltage) with block diagrams and description has been added
- Wave solder profile section has been added
- Physical dimensions section has been updated for better understanding and readability

RELIABILITY / QUALIFICATION SUMMARY:

Product specification approval, according to internal requirements, has been released by the Quality Department and the Product Management Department.