Würth Elektronik eiSos GmbH & Co. KG
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WÜRTH ELEKTRONIK MORE THAN YOU EXPECT

PCN (Product Change Notice)

☒ Major Change
☐ Minor Change

PCN Number:	PCN_WPME-FDSM_20250523
Affected Series:	WPME-FDSM
Affected Part Number:	173950536
PCN Date:	2025-05-23 (YYYY-MM-DD)
Effective Date:	Effective Immediately

Change Category:

☒ Equipment/Location
☒ General Data
☒ Material
☐ Process
☒ Product Design
☒ Shipping/Packaging
☒ Supplier
☐ Software

Contact:	Product Management
Phone:	+49 (0) 7942 - 945 5001
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E-Mail:	pcn.eisos@we-online.com

Datasheet Change:
☒ Yes ☐ No

Attachment:
☐ Yes ☒ No

DESCRIPTION OF CHANGE:

Due to an urgent case of component availability, this PCN has an accelerated PCN and effective date.
Due to an improvement of the production capability, Würth Elektronik eiSos has shifted the production of the affected part number to a new factory location.
With the aim of an extended product applicability, Würth Elektronik eiSos has updated the internal bill of materials and layout inside the module to ensure the best performance and the electrical specifications.
There will be no change in fit or quality of the product.
The new revision of the affected part numbers will be sent out after the previous revision is out of stock (according to FIFO - first-in, first-out).
The preliminary datasheets of the affected part numbers will be available on the website after the PCN date.
Link to the website: WPME-FDSM

PART NUMBER, REVISION & DATASHEET:

Part Number	Revision before change	Revision after change
173950536	4.0	5.0

The links in the table above are valid till effective date.

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DETAILS OF CHANGE:

All changes indicated below belong to the 173950536 part number.

The lot number has been adjusted.

Before Change	After Change
Previous production line lot number:	New production line lot number:
676xxxxxxxxxxx	682xxxxxxxxxxx
Country of origin: China	Country of origin: China

The datasheet operating conditions have been adjusted based on the new design.

Before Change

6 OPERATING CONDITIONS

Operating conditions are conditions under which the device is intended to be functional. All values are referenced to GND.

MIN and MAX limits are valid for the recommended ambient temperature range of -40°C to 85°C. Typical values represent statistically the utmost probable values at the following conditions: V_{IN}= 6.5V to 36V, I_{OUT}= 0.5A, T_A = 25°C, unless otherwise noted.

Table 6: Operating conditions.

SYMBOL	PARAMETER	MIN(1)	TYP(3)	MAX(1)	UNIT
V_{IN}	Input voltage	6.5	-	36	V
T_a	Ambient temperature	-40	-	85 (2)	°C
I_{OUT}	Nominal output current(5)	-	-	0.5	A
$C_{OUT\,MAX}$	Maximum output capacitance	-	-	1000	µF

After Change

6 OPERATING CONDITIONS

Operating conditions are conditions under which the device is intended to be functional. All values are referenced to GND.

MIN and MAX limits are valid for the recommended ambient temperature range of -40°C to 85°C. Typical values represent statistically the utmost probable values at the following conditions: V_{IN}= 6.5V to 36V, I_{OUT}= 0.5A, T_A = 25°C, unless otherwise noted.

Table 6: Operating conditions.

SYMBOL	PARAMETER	MIN(1)	TYP(3)	MAX(1)	UNIT
V_{IN}	Input voltage	6.5	-	36	V
T_a	Ambient temperature	-40	-	85 (2)	°C
I_{OUT}	Nominal output current(5)	-	-	0.5	A
$C_{OUT\,MAX}$	Maximum output capacitance	-	-	680	µF

The datasheet electrical specifications have been adjusted based on the new design.

Before Change

7 ELECTRICAL SPECIFICATIONS

Caution:
MIN and MAX limits are valid for the recommended ambient temperature range of -40°C to 85°C. Typical values represent statistically the utmost probable values at the following conditions: V_{IN}= 24V, V_{OUT}= 5V, I_{OUT}= 0.5A, T_A = 25°C, unless otherwise noted.

Table 7: Electrical specifications.

SYMBOL	PARAMETER	TEST CONDITIONS	LIMIT MIN(1)	LIMIT TYP(3)	LIMIT MAX(1)	UNIT
	Output Current					
I_{CL}	Current limit threshold		—	3.7	—	A
	Output Voltage					
V_{OUT}	Regulated output voltage		—	5	—	V
	Line regulation		—	—	0.3	%
	Load Regulation	10% to 100% load	—	—	0.6	%
	Total output voltage regulation		—	—	3	%
	Output voltage ripple		—	30	—	mV_{pp}
	Switching Frequency					
f_{SW}	Switching frequency		220	440	660	kHz
	Input Current					
I_{IN}	No load input current	Operating, switching	—	0.18	—	mA
	Efficiency					
η	Efficiency		—	90	—	%

After Change

7 ELECTRICAL SPECIFICATIONS

Caution:
MIN and MAX limits are valid for the recommended ambient temperature range of -40°C to 85°C. Typical values represent statistically the utmost probable values at the following conditions: V_{IN}= 24V, V_{OUT}= 5V, I_{OUT}= 0.5A, T_A = 25°C, unless otherwise noted.

Table 7: Electrical specifications.

SYMBOL	PARAMETER	TEST CONDITIONS	LIMIT MIN(1)	LIMIT TYP(3)	LIMIT MAX(1)	UNIT
	Output Current					
I_{CL}	Current limit threshold		—	1.5	—	A
	Output Voltage					
V_{OUT}	Regulated output voltage		—	5	—	V
	Line regulation		-0.4	±0.2	0.4	%
	Load Regulation	10% to 100% load	—	±0.6	—	%
	Total output voltage regulation		—	—	3	%
	Output voltage ripple		—	20	—	mV_{pp}
	Switching Frequency					
f_{SW}	Switching frequency		—	710	—	kHz
	Input Current					
I_{IN}	No load input current	Operating, switching	—	0.2	1.5	mA
	Efficiency					
η	Efficiency		—	88	—	%
		I_{OUT} = 0.125A	—	95	—	%

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The datasheet MTBF specifications have been adjusted based on the new design.

Before Change	After Change

9 RELIABILITY

Table 9: Reliability.

SYMBOL	PARAMETER	TEST CONDITIONS	TYP[3]	UNIT
MTBF	Mean time between failures	MIL-HDBK-217F, 25°C	$6800 \cdot 10^3$	h
		MIL-HDBK-217F, 85°C	$1300 \cdot 10^3$	h

9 RELIABILITY

Table 9: Reliability.

SYMBOL	PARAMETER	TEST CONDITIONS	TYP[3]	UNIT
MTBF	Mean time between failures	MIL-HDBK-217F, 25°C	$2000 \cdot 10^3$	h

The datasheet package specifications have been adjusted based on the new design.

Before Change	After Change

10 PACKAGE SPECIFICATIONS

Table 10: Package specifications.

ITEM	PARAMETER	TYP[3]	UNIT
Case	Black flame-retardant and heat-resistant plastic (UL94 V-0)	-	-
Potting material	Silicone, UL94V-0	-	-
Weight		2	g
Vibration	5g for 20 min	MIL-STD-202, Method 204	

10 PACKAGE SPECIFICATIONS

Table 10: Package specifications.

ITEM	PARAMETER	TYP[3]	UNIT
Case	Black flame-retardant and heat-resistant plastic (UL94 V-0)	-	-
Potting material	Silicone, UL94V-0	-	-
Weight		1.8	g
Vibration	5g for 20 min	MIL-STD-202, Method 204	

The diagrams shown in the TYPICAL PERFORMANCE CURVES chapter are updated based on the new internal BoM and integrated IC change. The used test conditions remain the same as before.

Due to the change of the integrated IC, the internal BoM has changed. The new components are shown in the BLOCK DIAGRAM chapter.

Before Change	After Change

13 BLOCK DIAGRAM

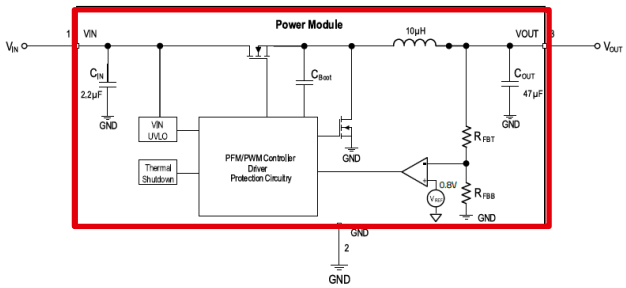

Figure 8: Block diagram.

13 BLOCK DIAGRAM

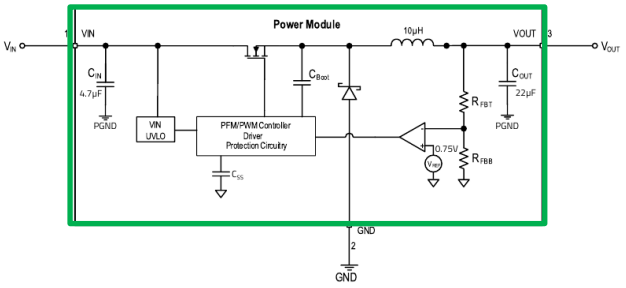

Figure 8: Block diagram.

The diagrams shown in the PROTECTION FEATURES chapter are updated based on the new internal BoM and integrated IC change. The used test conditions remain the same as before.

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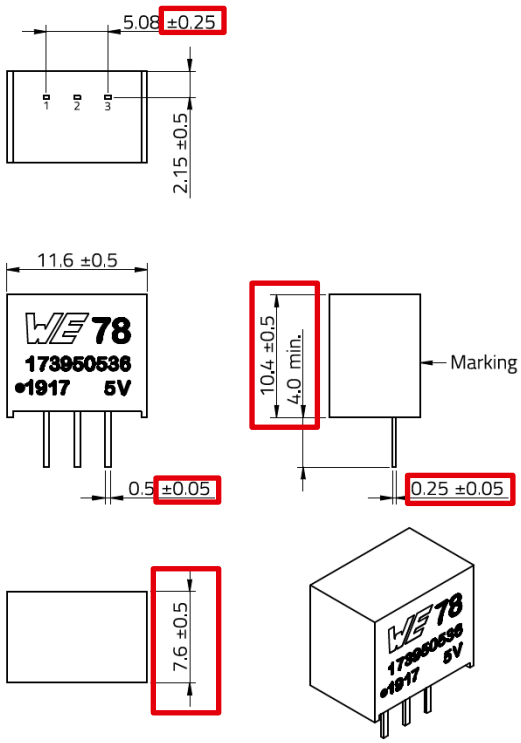
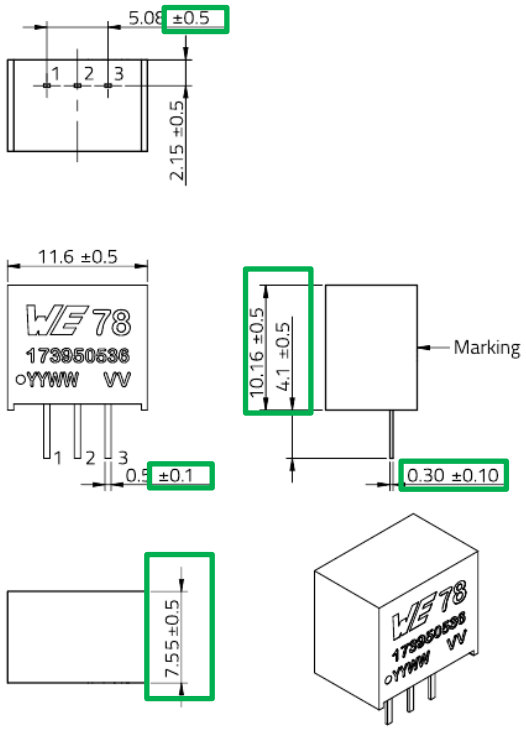
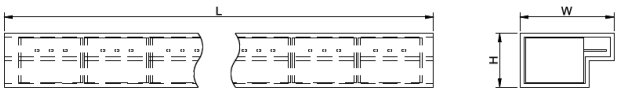
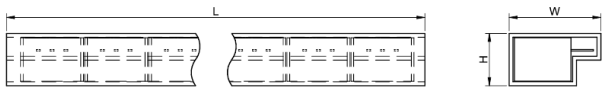
The mechanical dimensions have been updated based on the new production. The device dimensions and tolerances have been updated. The SIP-3 land pattern will remain the same.

Before Change	After Change
20 PHYSICAL DIMENSIONS 20.1 Component  Figure 16: Physical dimensions.	20 PHYSICAL DIMENSIONS 20.1 Component  Figure 16: Physical dimensions.

The tube dimensions have been updated according to the new production.

Before Change	After Change
20.3 Tube  Figure 18: Tube. Table 13: Packaging dimensions. Dimension / Tolerance / Value: L typ. 530mm; W typ. 10mm; H typ. 25.5mm	20.3 Tube  Figure 18: Tube. Table 13: Packaging dimensions. Dimension / Tolerance / Value: L typ. 528mm; W typ. 16.9mm; H typ. 9.6mm

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RELIABILITY / QUALIFICATION OF CHANGE:

Product approval is according to the specification criteria and is internally released by the product management department. The following items are part of the internal release process:

Test Item	Sample Size	Reference	Test Conditions	Acceptance
Visual Appearance	10	Product specification	Room temperature	Approved
Mechanical Parameters	10	Product specification	Room temperature	Approved
Electrical Parameters	10	Product specification	Room temperature	Approved

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