



Product / Process Change Notification (PCN)

- Major change
 Minor change

<p>PCN #: PCN_IndCMBNC_20240126</p> <p>Affected Series: WE-CMBNC-Series 744801xxx 744802xxx 744803xxx 744804xxx 744805xxx 744806xxx and S – Part Numbers</p> <p>PCN Date: October 26, 2023</p> <p>Effective Date: January 26, 2024</p>	<p>Change Category:</p> <p><input type="checkbox"/> Equipment / Location <input checked="" type="checkbox"/> General Data <input type="checkbox"/> Material <input type="checkbox"/> Process <input checked="" type="checkbox"/> Product Design <input type="checkbox"/> Shipping / Packaging <input checked="" type="checkbox"/> Supplier <input type="checkbox"/> Software</p>
<p>Contact: Product Management</p> <p>Phone: +49 (0) 7942 - 945 5001</p> <p>Fax: +49 (0) 7942 - 945 5179</p> <p>E-Mail: pcn.eisos@we-online.com</p>	<p>Data Sheet Change: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Attachment: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>

Description and purpose of change:

In order to meet current market demands, Würth Elektronik will add 2 new production plants for cores, which we are using in the hole WE-CMBNC-Series.

To assure the accessibility of the product, Würth Elektronik invested in new tooling for the core housings and base plates.

The Series have been recertified according to the international standard IEC 60938-2. The rated voltage and the climate category have been increased accordingly.

Würth Elektronik qualified the Series internally according to AEC-Q200 Automotive Standard.

In line with internal standardisation, Würth Elektronik will implement new measurement method for attenuation and impedance. The current attenuation curves and the schematic will be updated and new graphs will be added in the datasheets.

The label information will be updated also due to the both requalification standards.

There will be no change in function of the product.

Detail of Change:

1. Change the current housings for the toroidal cores:

To improve the winding process and mechanical stability we invested in new tooling for housings in size M, L, XL and XXL. The material thickness has been increased according to **table 1**. We also improved the design, adding 4 fixation buckles to get the both housing halves closed together smoothly:

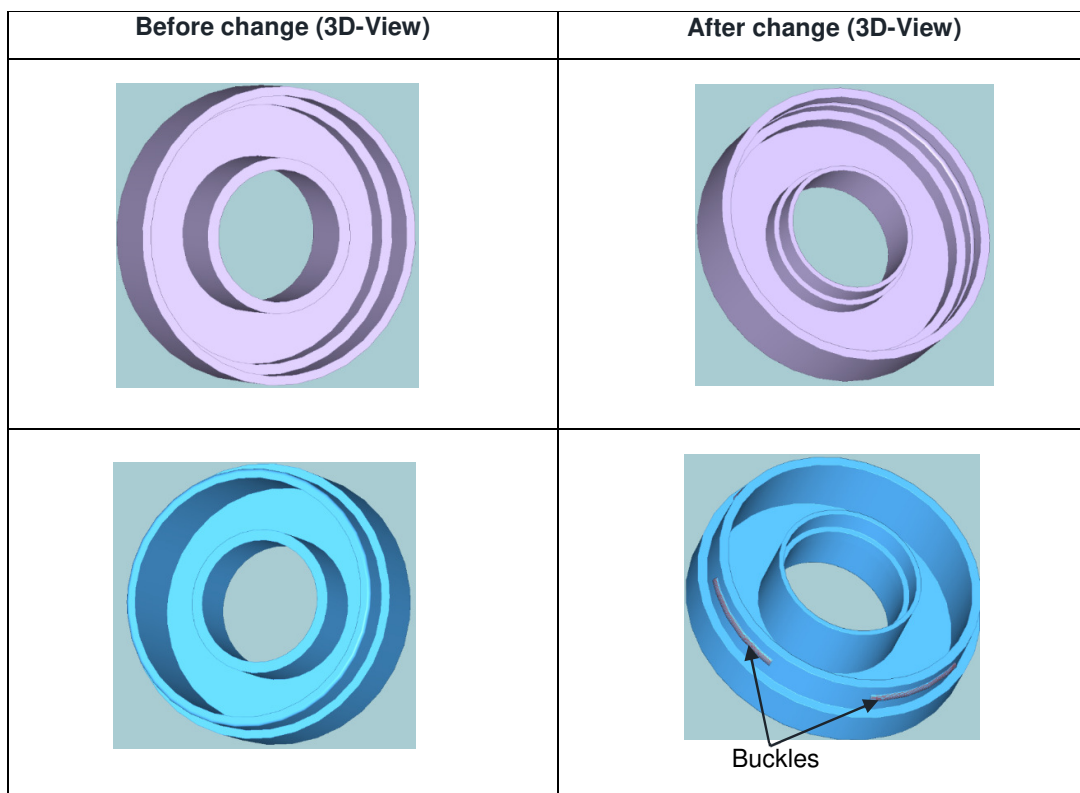


Table 1

	Article number starting with	Material thickness before change [mm]	Material thickness after change [mm]
Size M	744803xxxx	0,7	0,8
Size L	744804xxxx	0,7	1,0
Size XL	744805xxxx	0,7	1,0
Size XXL	744806xxxx	0,7	1,0

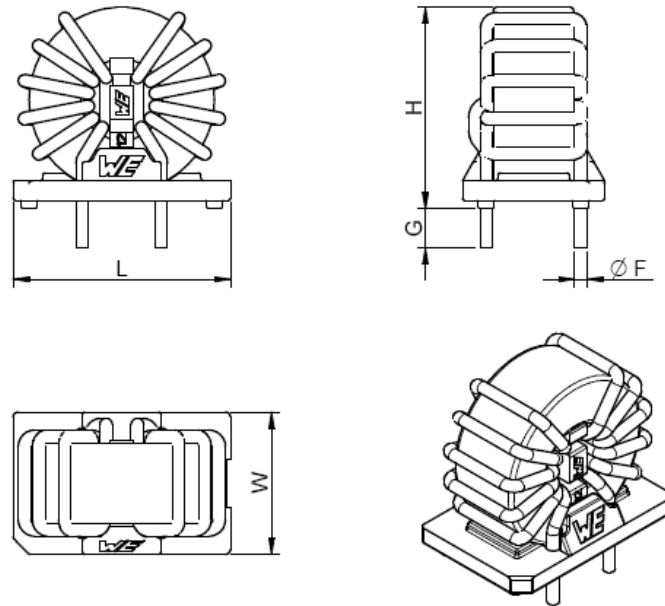


Due to this housing design improvement, the DC Resistance and the mechanical dimensions will change according to **table 2** and **figure 1** below:

Table 2

Article	DC Resistance [mΩ]		Dimensions [mm]					
	Before change	After change	Before change			After change		
	R _{DC}	R _{DC}	L	W	H	L	W	H
7448026002			18			19		
7448027001			18			19		
7448030247			22		25	23		26
7448030333	90	94	22		25	23		26
744803033301	90	94	22		26	23,5		27
744803033302	90	94	22		25	23		26
7448030417	50	52	22		25	23		26
7448030509	28	32	22		25	23		26
744803050910	28	32	22		25	23		26
7448031002	6	6,3	23			24		
7448031501	3	3,2	23			24		
744803150101	3	3,2	23			24		
7448040515	38	40						
7448040707	20	22	28			29		
7448041104	8,5	8,8	28			29		
7448041502			30			29		
7448050219					39			38
7448051307			36		35	35,5		34,5
7448060535			42			43		
7448060620			42			43		
7448060814			43			43,5		
7448061309			44			45		
7448061507			46	27		46,5	27,5	
7448062105			46	27		46,5	27,5	
7448062603				27			27,5	
7448063801				27			27,5	

Figure 1

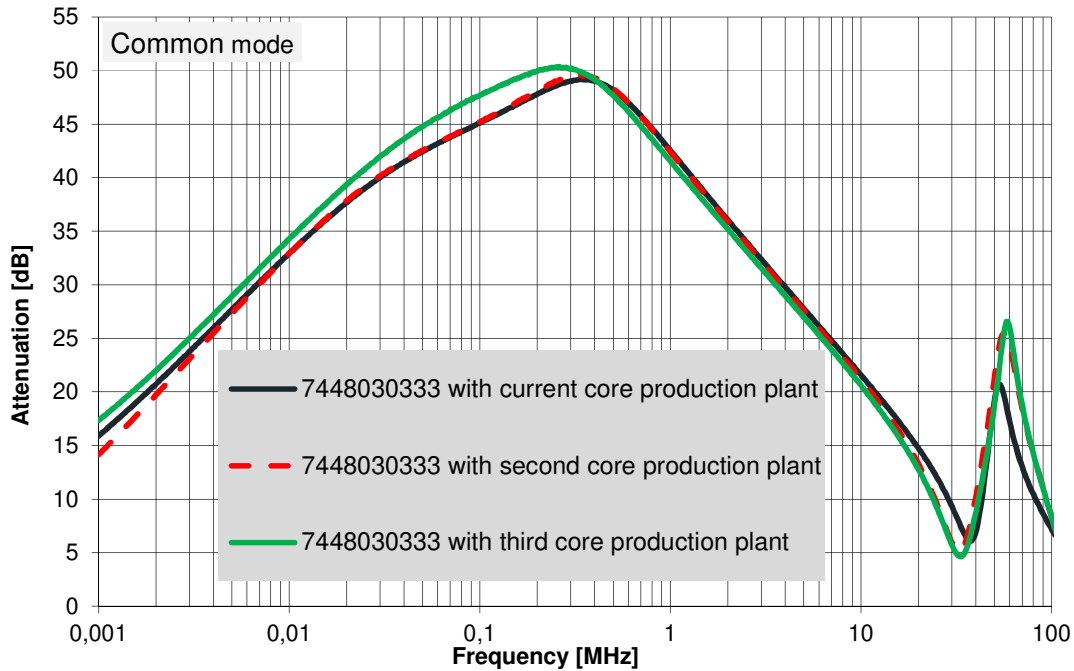


2. Addition of 2 new production plants for toroidal core:

To reduce the lead time of the Series, we successfully qualified 2 further core production plants. It will be possible to distinguish all 3 different core plants in our lot number. The last 3 digits of the lot number are assigned for traceability:

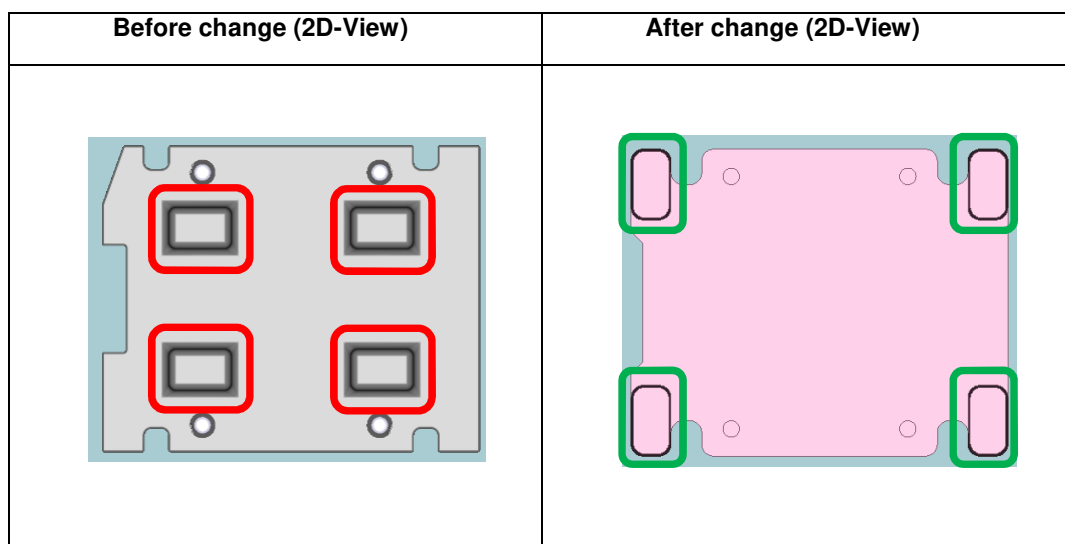
- xxxxxxxxxxxx100: The toroidal core of first production plant has been used
- xxxxxxxxxxxx200: The toroidal core of second production plant has been used
- xxxxxxxxxxxx300: The toroidal core of third production plant has been used

There will be a negligible difference in the attenuation behaviour of the choke. As example the article 7448030333 on next page:

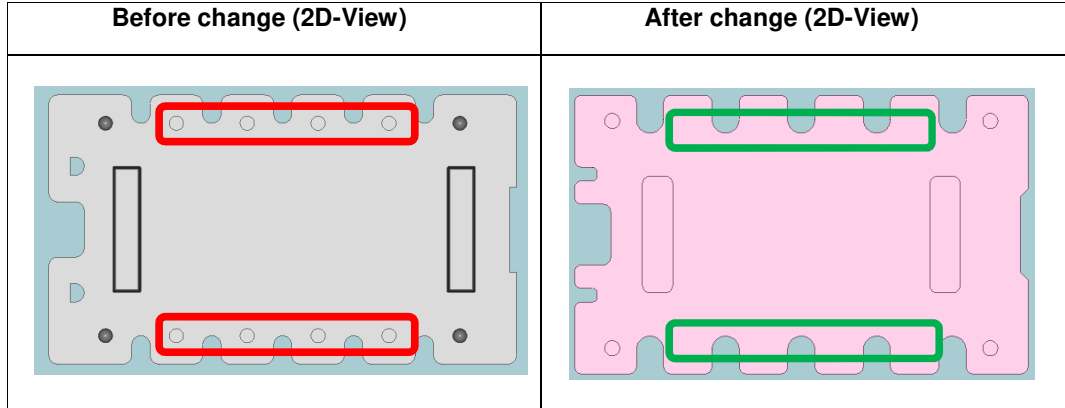


3. Change of the tooling for some base plates:

3.1. Change the position of the standoffs for base with Size M (744803xxxx):



3.2. Empty Holes which were designed for additional fixation pins will be closed as they didn't have any function more. This concerns all bases where the pins are injected in the base.
 Bases with winding ends as direct pins are not affected:



4. VDE Certification:

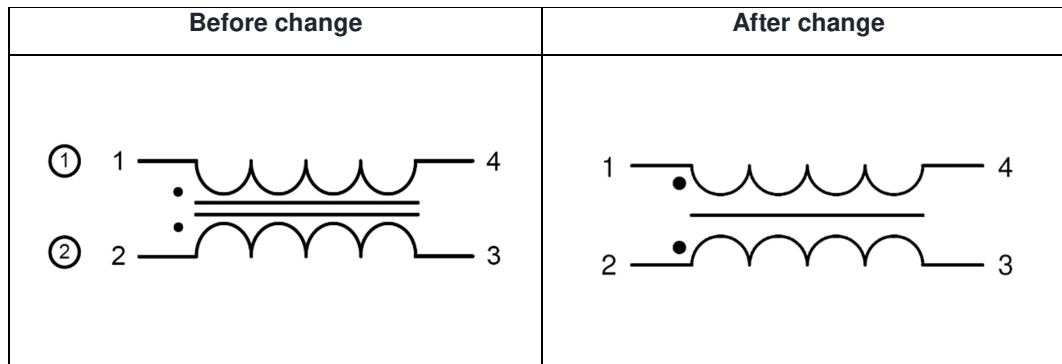
After implementation of new tooling we applied for VDE recertification according new standard IEC 60938-2. The rated voltage and climate category have been updated:

	Before change	After change
Rated voltage UR	250 V (AC)	300 V (AC)
Climate category	40/125/21	55/125/21
Operating temperature	-40 °C up to 125 °C	-55 °C up to 125 °C

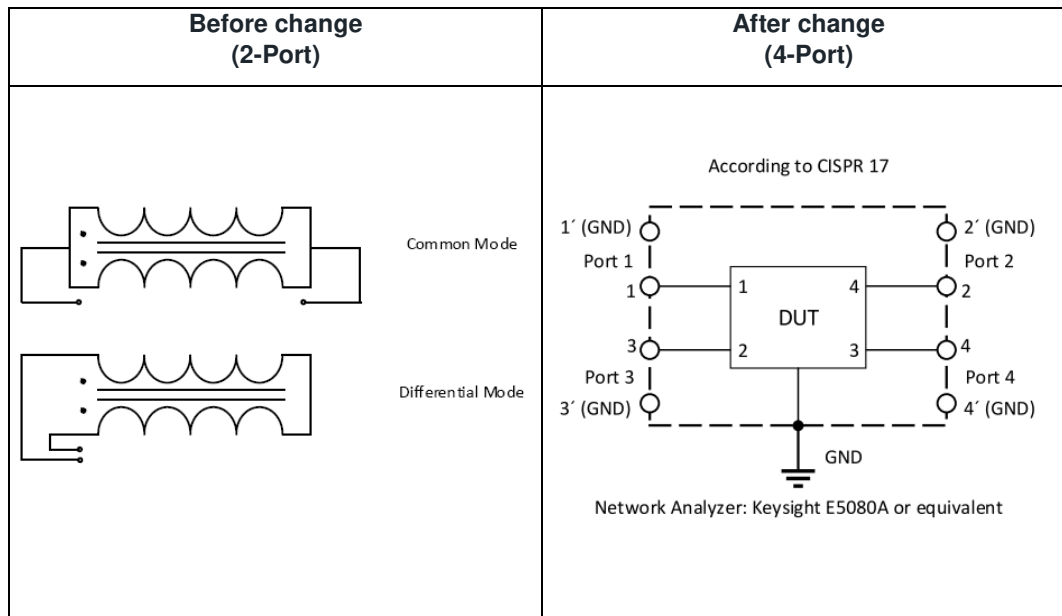
5. Qualification:

We successfully qualified the WE-CMBNC Series according to the Qualification Standards AEC-Q200, table 5 for THT-Magnetic inductors in temperature domain -55 °C to 125 °C. The Qualification overview will be attached.

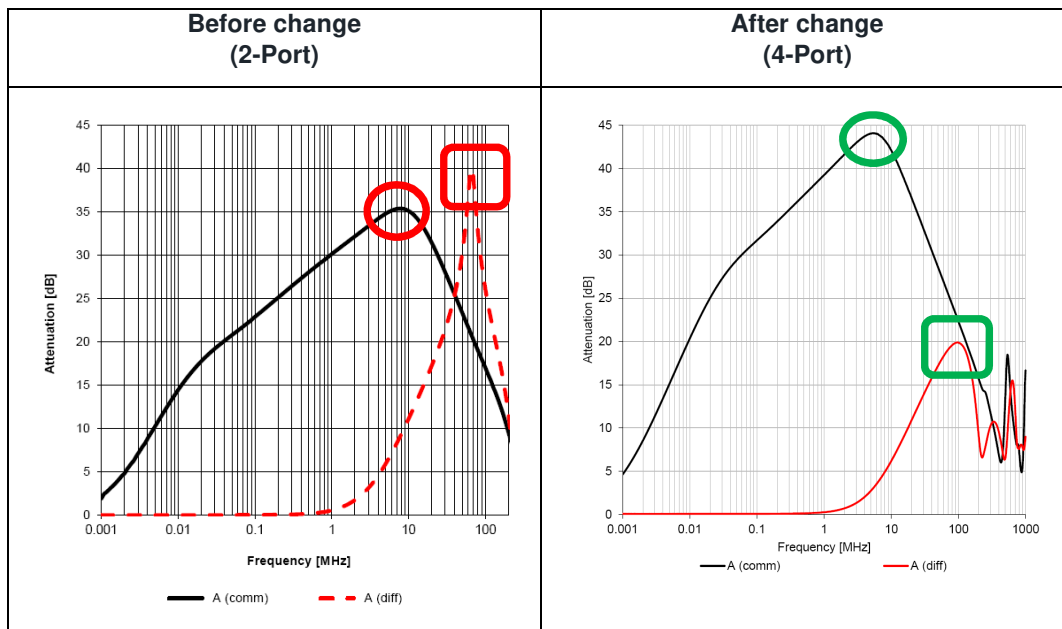
6. Change of the schematic:



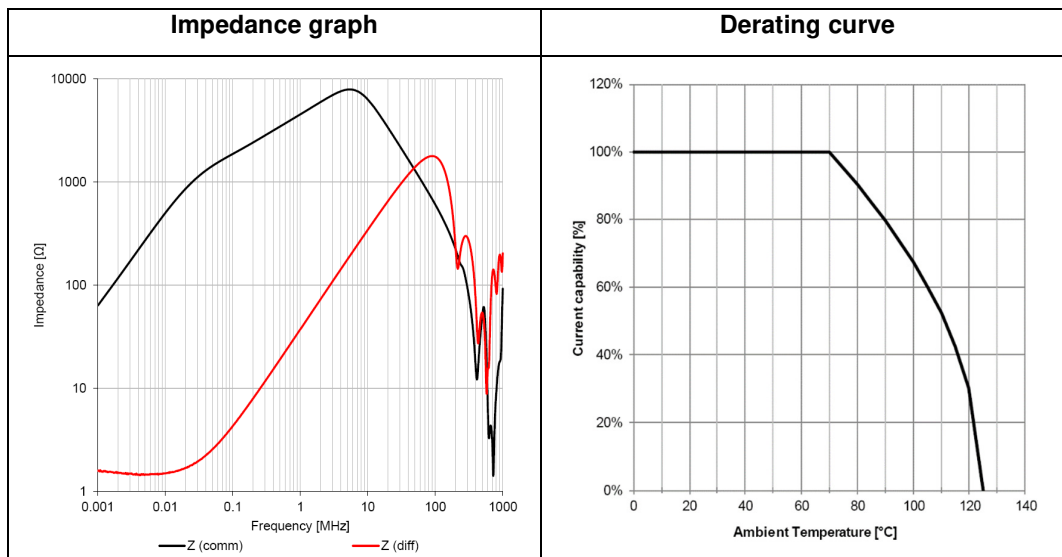
7. Change of the test setup for attenuation measurement:



8. Update of the attenuation graphs in the datasheets due to the new test setup (Example 7448040707):



9. Add the impedance graphs and Derating curve in the datasheets (Example 7448040707):





10. **Packaging label:**

According to the standard IEC 60938-2 we will additionally show the inductance value with tolerance in the label of the packaging. This affects all sizes:

Before change	After change
<div style="border: 1px solid black; padding: 5px;"> <p>(1P) Part No.: 744 805 021 9 </p> <p>(Q) Quantity: 192 pcs. </p> <p>(1T) Lot No.: 277010012308000</p> <p>(16D) Date Code: 2023 - 02 - 24</p> <div style="border: 2px solid red; padding: 2px; display: inline-block; margin-top: 10px;"> XL 190 mH; 2 A; 310 mΩ 250V (AC) 70°C 40/125/21 </div> <p style="font-size: small; text-align: center;">eiSos Made in China</p> </div>	<div style="border: 1px solid black; padding: 5px;"> <p>(1P) Part No.: 744 805 021 9 </p> <p>(Q) Quantity: 192 pcs. </p> <p>(1T) Lot No.: 277010012308000</p> <p>(16D) Date Code: 2023 - 02 - 24</p> <div style="border: 2px solid green; padding: 2px; display: inline-block; margin-top: 10px;"> XL 190 mH -30% +50%; 2 A; 310 mΩ 300V (AC) 70°C 55/125/21 </div> <p style="font-size: small; text-align: center;">eiSos Made in China</p> </div>

Reliability / Qualification Summary:

Product approval is according to the specification and is internally released by the Product Management Department.

The following items are part of the internal release process:

- High Temperature Exposure
- Temperature Cycling
- Biased Humidity
- Operational Life
- External Visual
- Physical Dimension
- Terminal Strength(Leaded)
- Resistance to Solvents
- Mechanical Shock
- Vibration
- Resistance to Soldering Heat
- ESD
- Solderability
- Electrical Characterization
- Low Temperature Storage Life
- Washability