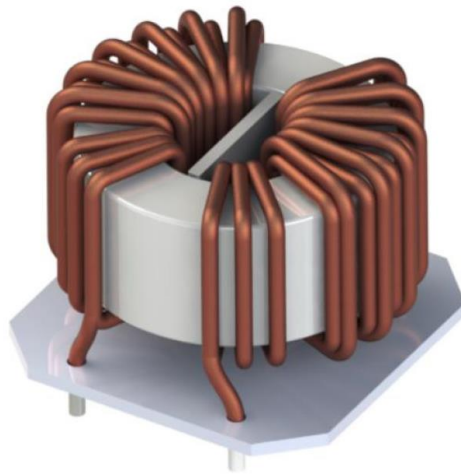
 <b>PREMO</b>	Customer <b>15118</b>	Customer Ref.	Description H-CMC 2x21mH 25Arms			
	Project Ref. X-15118-003	Prototype Ref.	Ordering Code	Date 11/01/2022	Edition 1	Page 1/7

# Technical Specification



**Common Mode Choke  
2x21mH 25Arms**

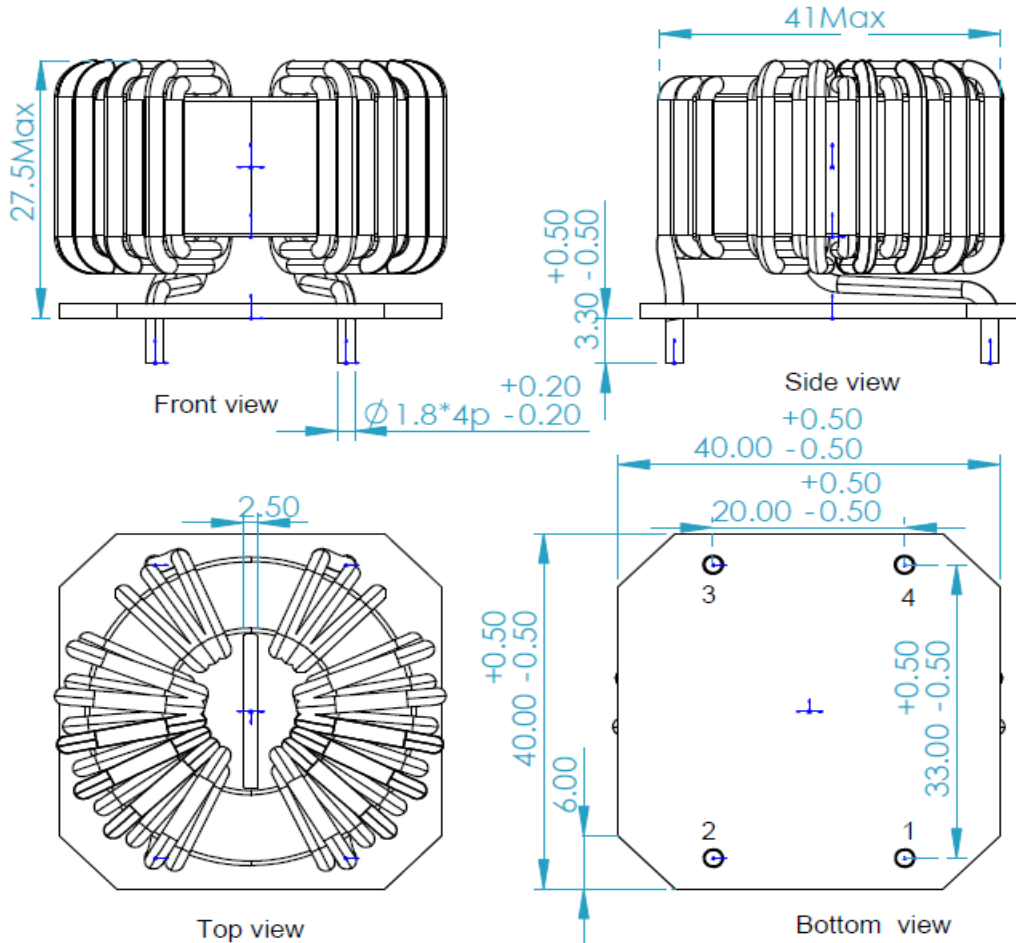
Made by (R&D Engineer)	Checked by (R&D Manager)	Approved by (Quality)	Approved by (Customer)
Date: 11/01/2023	Date: 11/01/2023	Date: 12/01/2023	Date:
Signature: Arthur. Z <i>Arthur.Zeng</i> Premo.S.L	Signature: R. Rodriguez <i>Rodriguez</i>	Signature: <i>meigang. chen</i>	Signature:

DIMENSIONS : mm	TECHNICAL SPECIFICATION	
-----------------	-------------------------	---



Customer <b>15118</b>	Customer Ref.	Description H-CMC 2x21mH 25Arms			
Project Ref. X-15118-003	Prototype Ref.	Ordering Code	Date 11/01/2022	Edition 1	Page 2/7

## 1- Dimensions and Pins Configuration (mm)



### Notes :

- Wound toroidal core perpendicular, centered into the base plate
- Vertical spacer of 2.5 Ref mm thick to separate the winding
- Direct outputs by  $\phi 1.8$  mm peeled and tinned copper wire under base plate. A possible spike of tin + 2mm MAX may be present but will melt during reflow soldering process
- Marking under base plate.
- General tolerance according to ISO 2768-1 m where not indicated.

**Weight:** Approximately: 75g ref

DIMENSIONS : mm

TECHNICAL SPECIFICATION

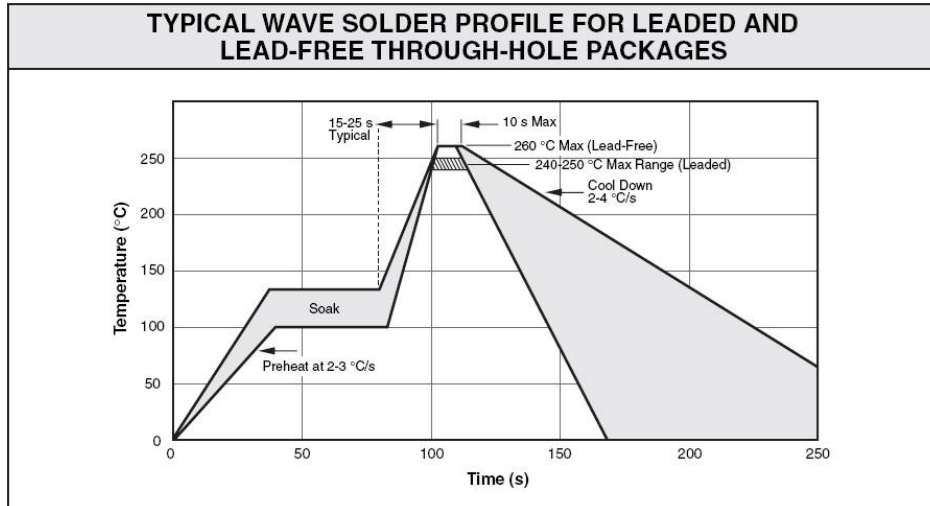




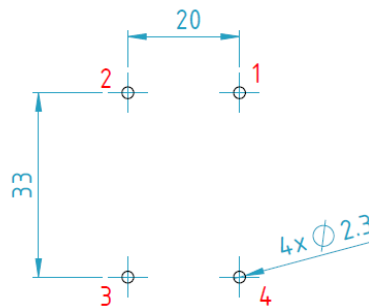
Customer <b>15118</b>	Customer Ref.	Description H-CMC 2x21mH 25Arms			
Project Ref. X-15118-003	Prototype Ref.	Ordering Code	Date 11/01/2022	Edition 1	Page 3/7

## 2- Soldering and recommended Pad Layout

### 2.1 Soldering profile



### 2.2 Recommended Pad Layout



Top View

Ø2.40: Recommended hole in the PCB


## 3-Bill of Materials

Part	Material Type
Core	Nanocrystalline toroid core / PET Rynite - Class F/155°C - UL94V-0
Wire	Enamelled copper wire Class H (180°C MIN) Grad2 / UL
Base plate	FR4 (TG150°C class - UL94 V-0)
Glue for assembling	Epoxy
Outputs	Tinned RoHS

DIMENSIONS : mm

TECHNICAL SPECIFICATION



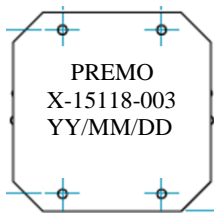
	Customer <b>15118</b>	Customer Ref.	Description H-CMC 2x21mH 25Arms			
	Project Ref. X-15118-003	Prototype Ref.	Ordering Code	Date 11/01/2022	Edition 1	Page 4/7

## 4-Marking and Packaging

### 4.1 Marking

The choke is marked underneath the base plate with following information, A dot (.) marked next to pin 1 to define pin 1:

DD : Day  
MM : Month  
YY : Year



### 4.2 Packaging

#### 4.2.1 Tray


Plastic tray 375 x 275 (LxW): 20 parts per tray



DIMENSIONS : mm

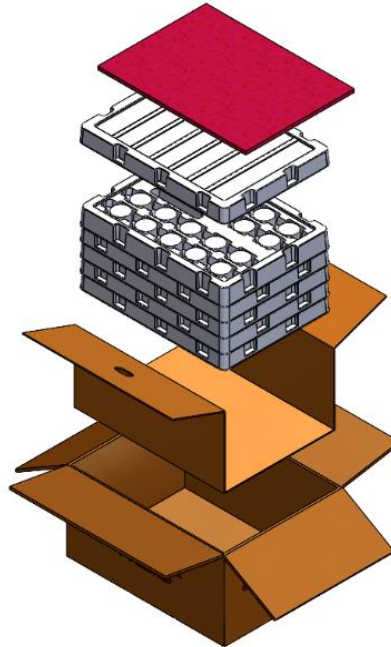
TECHNICAL SPECIFICATION



	Customer <b>15118</b>	Customer Ref.	Description H-CMC 2x21mH 25Arms			
	Project Ref. X-15118-003	Prototype Ref.	Ordering Code	Date 11/01/2022	Edition 1	Page 5/7

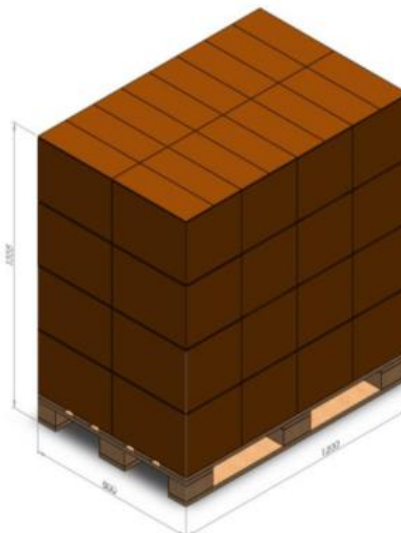
#### 4.2.2 Box

Tray placed in 400 x 300 x200 carton boxes  
100 parts per box, less than 12 Kg



#### 4.2.3 Pallet


3000 parts in a European pallet  
Max Pallet dimension (LxWxH): 1200x800x1000



DIMENSIONS : mm

TECHNICAL SPECIFICATION



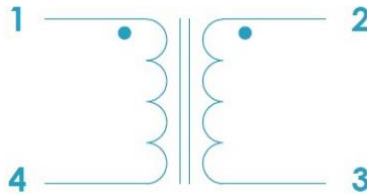
	Customer <b>15118</b>	Customer Ref.	Description H-CMC 2x21mH 25Arms			
	Project Ref. X-15118-003	Prototype Ref.	Ordering Code	Date 11/01/2022	Edition 1	Page 6/7

### 3- Electrical Parameters

	Symbol	MIN value	TYP value	MAX value	Unit	Test condition (25±5°C)
Turn ratio	1-4 / 2-3	0.98	1	1.02	-	10kHz - 1V
Inductance @ 10kHz	L <sub>1-4</sub> = L <sub>2-3</sub>	13.7*	21	30.5	mH	10kHz-0.3V
Inductance @ 100kHz	L <sub>1-4</sub> = L <sub>2-3</sub>	3*	5	7.5	mH	100kHz-0.3V
Leakage inductance	L <sub>1-4</sub>	/	14.5	/	μH	100kHz-0.1V 2-3 shorted
DC resistance	W1=W2	/	6.5	10	mΩ	DC@25°C
Dielectric Strenght test*	DWI	-	-	3*	mA	between W1 and W2 1.5KVAC @ 50Hz <sup>(1)</sup>

<sup>(1)</sup> 1min for qualification / 3sec in mass production  
Critical characteristics are marked with a red asterisk (\*)

### 4- Electrical Diagram



### 5- Functional Performances

#### 7.1 Operation

Common Mode Choke 2 x 21mH -25Arms

### 6- Temperature range


Operating temperature: -40°C/+150°C  
Storage temperature: -40°C/+125°C

The component shall be cooled down with an adapted cooling system.

DIMENSIONS : mm

TECHNICAL SPECIFICATION



	Customer <b>15118</b>	Customer Ref.	Description H-CMC 2x21mH 25Arms																							
	Project Ref. X-15118-003	Prototype Ref.	Ordering Code	Date 11/01/2022	Edition 1	Page 7/7																				
<table border="1"> <thead> <tr> <th>Edition</th> <th>Changed by</th> <th>Date</th> <th>Change description</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>Arthur. Z</td> <td>22/04/2022</td> <td>-Preliminary document. All the parameters on this document have to be validated on first prototypes</td> </tr> <tr> <td>0.1</td> <td>Arthur. Z</td> <td>24/07/2022</td> <td>Update spec</td> </tr> <tr> <td>0.2</td> <td>Arthur. Z</td> <td>11/08/2022</td> <td>Add Ls &amp; Frequency curve 4.2+/-0.5 to 3.3+/-0.5</td> </tr> <tr> <td>1</td> <td>Arthur. Z</td> <td>11/01/2022</td> <td>Add _ Packaging</td> </tr> </tbody> </table>							Edition	Changed by	Date	Change description	0.0	Arthur. Z	22/04/2022	-Preliminary document. All the parameters on this document have to be validated on first prototypes	0.1	Arthur. Z	24/07/2022	Update spec	0.2	Arthur. Z	11/08/2022	Add Ls & Frequency curve 4.2+/-0.5 to 3.3+/-0.5	1	Arthur. Z	11/01/2022	Add _ Packaging
Edition	Changed by	Date	Change description																							
0.0	Arthur. Z	22/04/2022	-Preliminary document. All the parameters on this document have to be validated on first prototypes																							
0.1	Arthur. Z	24/07/2022	Update spec																							
0.2	Arthur. Z	11/08/2022	Add Ls & Frequency curve 4.2+/-0.5 to 3.3+/-0.5																							
1	Arthur. Z	11/01/2022	Add _ Packaging																							
DIMENSIONS : mm		TECHNICAL SPECIFICATION			