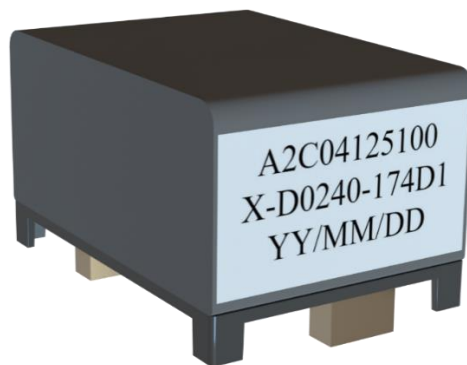



	Customer D0240	Customer Ref. A2C04125100	Description HEV 12V CHOKE 400 nH (261Adc)			
	Project Ref. X-D0240-174	Prototype Ref.	Ordering Code X-D0240-174D1	Date 09/07/2020	Edition 1	Page 1/6

Technical Specification

HEV 12V CHOKE 400 nH (261 Adc)



Made by (R&D Engineer)	Checked by (Innovation Manager)	Approved by (Quality Manager)
Date: 09/07/2020	Date: 09/07/2020	Date: 10/07/2020
Signature: J.M. Codes 	Signature: R. Rodríguez 	Signature: 

DIMENSIONS: mm

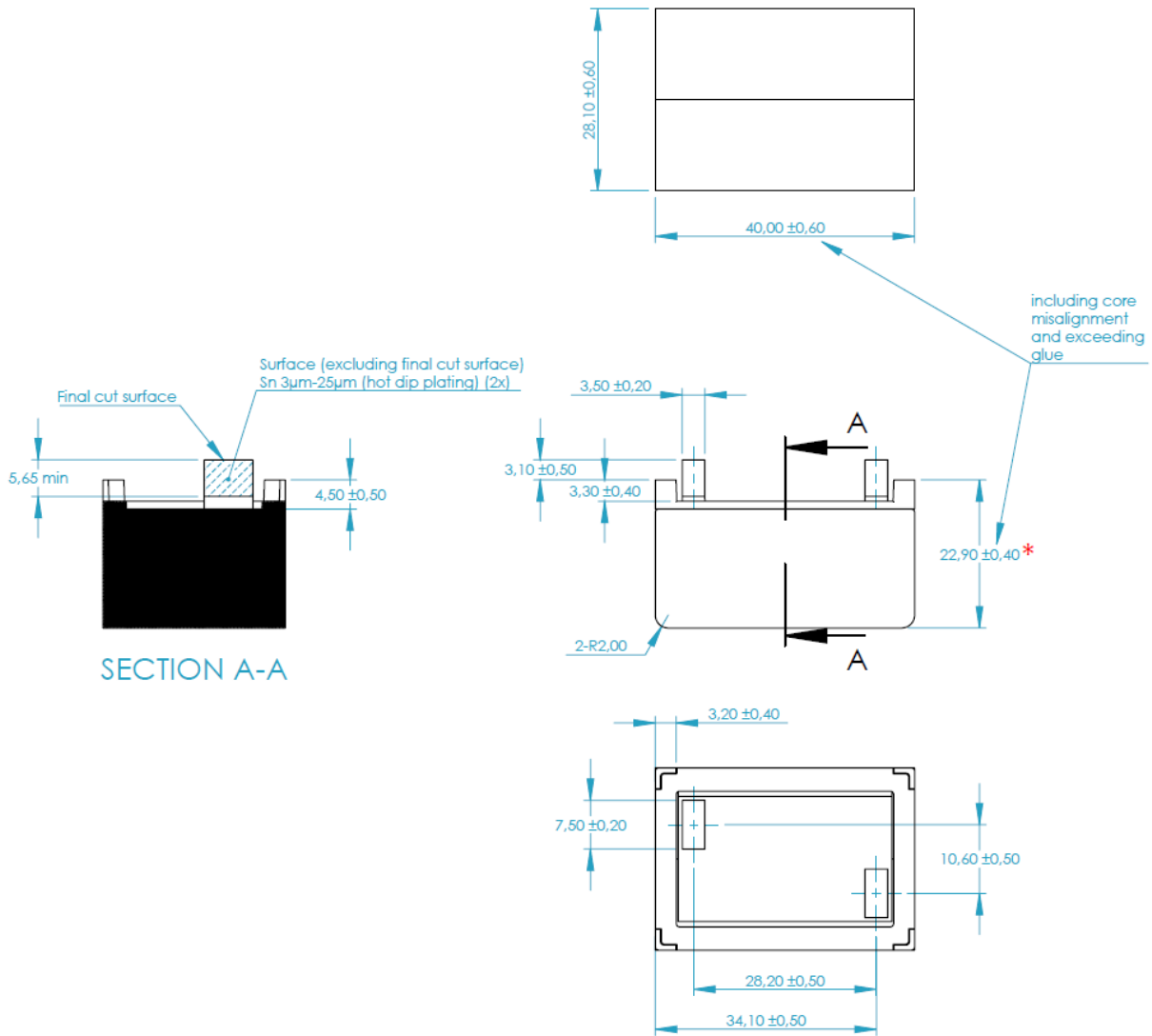
TECHNICAL SPECIFICATION





Customer D0240	Customer Ref. A2C04125100	Description HEV 12V CHOKE 400 nH (261Adc)			
Project Ref. X-D0240-174	Prototype Ref.	Ordering Code X-D0240-174D1	Date 09/07/2020	Edition 1	Page 2/6

1- Dimensions and Pins Configuration



Notes:

- Critical characteristics are indicated by red asterisk (*)
- Tolerances according ISO 2768-1m if not already indicated on the drawing.
- Approx. weight 120 g
- The component shall be properly mounted onto a cooling system to reduce the heating.

DIMENSIONS: mm

TECHNICAL SPECIFICATION





Customer D0240	Customer Ref. A2C04125100	Description HEV 12V CHOKE 400 nH (261Adc)			
Project Ref. X-D0240-174	Prototype Ref.	Ordering Code X-D0240-174D1	Date 09/07/2020	Edition 1	Page 3/6

2- Electrical parameters

2.1 – Technical specifications

TOPOLOGY	Filtering Choke
SWITCHING FREQUENCY (kHz)	100
TOTAL OUTPUT CURRENT	261 Adc
MAX OPERATION VOLTAGE	50 V
OPERATING TEMPERATURE	-40 to +150 °C (Including self-heating of the part)
AMBIENT TEMPERATURE	-40 °C to +90 °C
STORAGE TEMPERATURE	-40 °C to +85 °C
CONNECTION INTERFACE	Pin Through Hole
CONTINUOUS DC CURRENT	261 A (Tamb ≤90 °C)
PEAK CURRENT (<10 s)	311 A (Tamb <0 °C)
PEAK CURRENT (<1 s)	331 A (Tamb <0 °C)
ESTIMATED TOTAL LOSSES (@100kHz, 16Arms, 100°C)	
Copper losses DC @261 Adc	8 W
Core losses @ 100 kHz, 280 Apk, 261 Adc	2 W
Total losses	10 W

- Total losses do not include: Skin and proximity effects, harmonics and gap (fringing flux) losses.

2.2 – Parameters tested

INDUCTANCE @ 0 Adc *	0.53 μH +30/-15 %
INDUCTANCE @ 261 Adc	0.40 μH +25/-15 %
DC RESISTANCE @25° C *	76 μΩ ±10%
DIELECTRIC STRENGTH ⁽¹⁾ *	
Winding to Core	500 Vac, 50/60Hz, 2 sec, 3.5 mA

Notes:

- Inductance measured at 100 kHz / 1 Vac
- ⁽¹⁾ 1 min for qualification / 2 sec for mass production
- Critical characteristics are indicated by red asterisk (*)

DIMENSIONS: mm

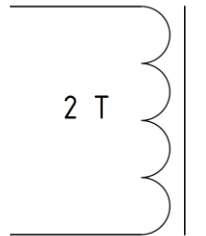
TECHNICAL SPECIFICATION





Customer D0240	Customer Ref. A2C04125100	Description HEV 12V CHOKE 400 nH (261Adc)			
Project Ref. X-D0240-174	Prototype Ref.	Ordering Code X-D0240-174D1	Date 09/07/2020	Edition 1	Page 4/6

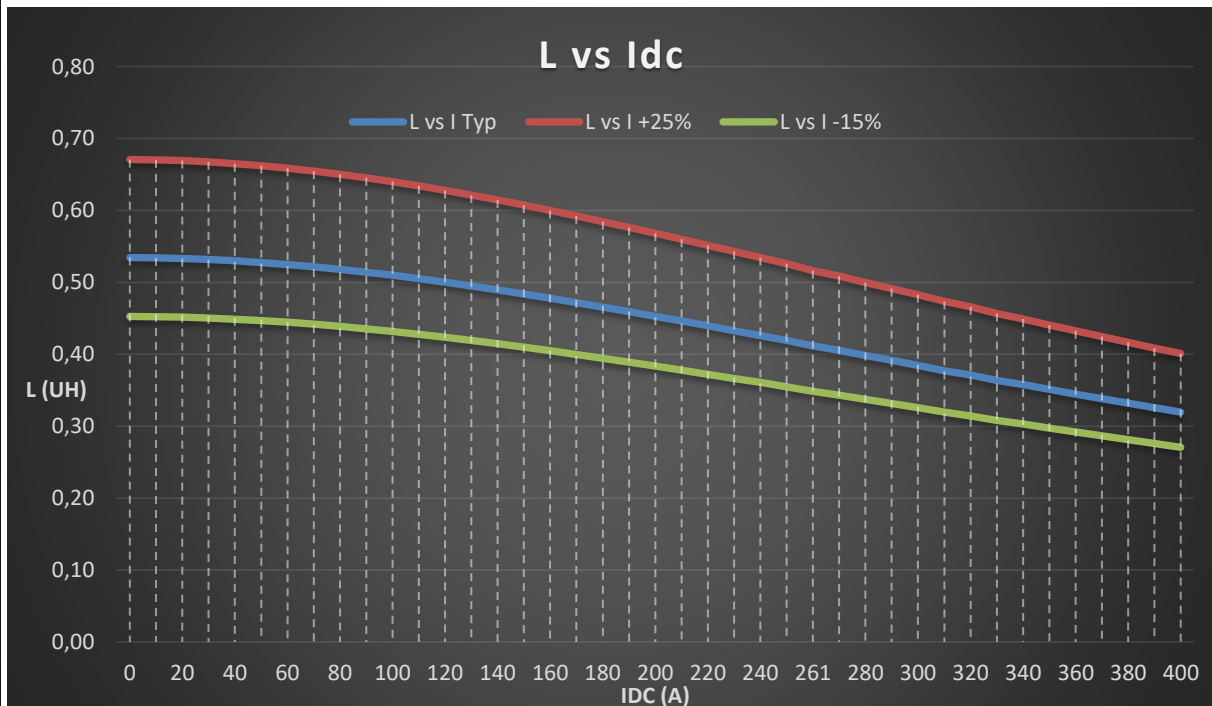
3- Electrical Diagram



4- Inductor Raw Material

CORE	Format	EQ40/18/14
	Material	FeSi μ 60
BASE	Custom LCP E4008	
WINDING	Enameled Cu Flat wire	
TERMINALS	Flat wire PTH. Tinned but the cutting edge, hot dip plating, Sn 3 μ m-25 μ m	
POTTING	Coolmag	
ADHESIVE	Epoxy adhesive	


5- Performance



DIMENSIONS: mm

TECHNICAL SPECIFICATION

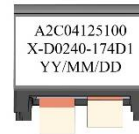


	Customer D0240	Customer Ref. A2C04125100	Description HEV 12V CHOKE 400 nH (261Adc)			
	Project Ref. X-D0240-174	Prototype Ref.	Ordering Code X-D0240-174D1	Date 09/07/2020	Edition 1	Page 5/6

6- Marking

Part is labeled on lateral side as below, first row contains customer PN, second row Premo PN, third row contains data manufacturing (Year/Month/Day), digit height 2 mm max:

A2C04125100
X-D0240-174D1
YY/MM/DD



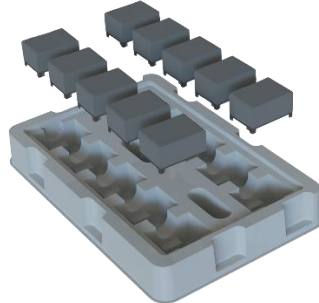
7- Additional requirements

- Cleanliness TST N 002 02.21 001 Product cleanliness power electronic
- Adhesion test according to TST N 001 16.02 / A2C04321900
- Gluing area, surface tension mi. 38 mN/m, surface roughness: Rz3 to Rz35

8- Packaging

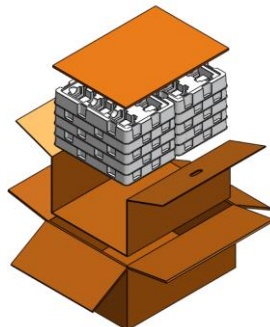
8.1- Tray

Plastic tray 255x170mm: 10 parts per tray



8.2- Box


Trays placed in 400x300x200 carton boxes – 10 trays per box
100 parts per box, 12kg approx.



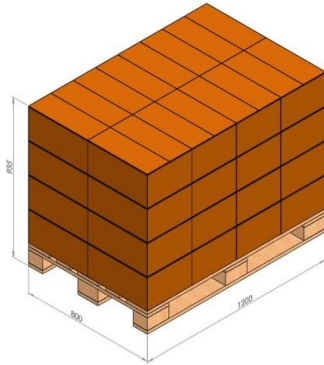
DIMENSIONS: mm

TECHNICAL SPECIFICATION



	Customer D0240	Customer Ref. A2C04125100	Description HEV 12V CHOKE 400 nH (261Adc)			
	Project Ref. X-D0240-174	Prototype Ref.	Ordering Code X-D0240-174D1	Date 09/07/2020	Edition 1	Page 6/6

- 8.3- Pallet**
 3200 parts in a European pallet
 Max pallet dimensions (L x W x H): 1200 x 800 x 1600



9- Edition Control

Edition	Changed by	Date	Change description
0.0	J.M. Codes	20/02/2020	Preliminary Edition. All parameters specified in this document must be validated by measurements on first prototypes. Core losses are based on estimations, real losses depend on application and need to be tested.
0.1	J.M. Codes	25/02/2020	Updated DCR tolerance.
0.2	J.M. Codes	25/02/2020	Updated critical characteristics (DCR, Height and L @ 0A)
0.3	J.M. Codes	20/05/2020	Updated values according SIR samples, DCR
0.4	J.M. Codes	12/06/2020	Updated values according SIR samples, L@0A and performance.
0.5	J.M. Codes	02/07/2020	L@0A updated tolerance: +30 % -25 %
1	J.M. Codes	09/07/2020	Updated Marking Typo error (D1). DV close edition. Updated Marking and packaging definition.

DIMENSIONS: mm

TECHNICAL SPECIFICATION

