

CBO43HP1/4-50A4

Product Specification For Inductive Common Mode Nanotech® Cores



MH&W International Corp.

575 Corporate Drive, Suite 4200, Mahwah, NJ 07430 USA

Phone 201-252-8125 Email: sales@mhw-intl.com

Mechanical Specification

Bare Core Dimensions:

1.97 x 1.57 x 0.79 inch
(50 x 40 x 20 mm)

le: 14.1 cm

Ae: 0.8 cm²

Weight: 0.18 lbs (82.0 grams)

Packing: 12 pc/layer, 5 layers/box

Box Quantity: 60 pieces

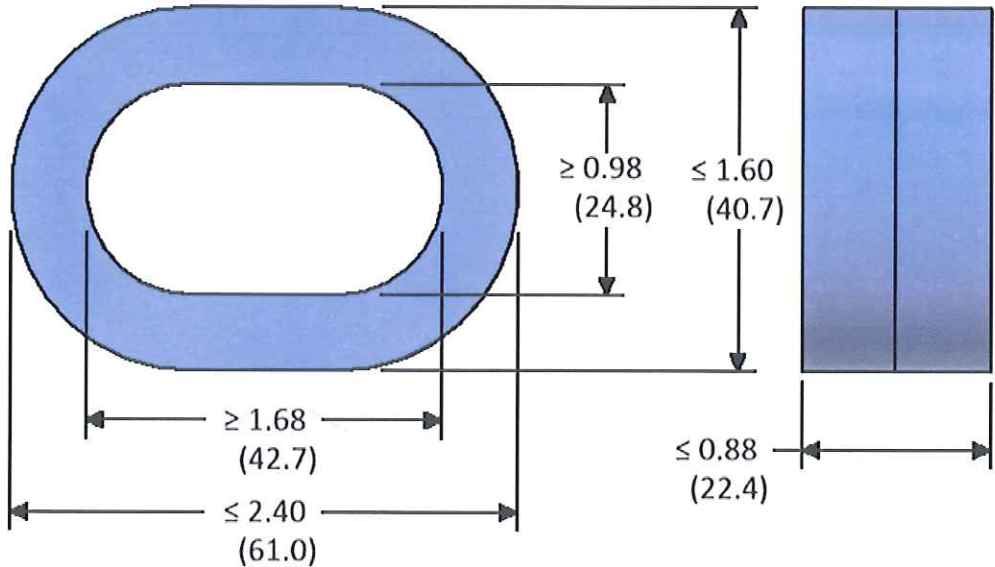
Core Material: Nanocrystalline

Currie Temp: 1,112°F (600 °C)

RTI Temp (0.81): 248°F (120°C)

Marking:

CBO43HP1/4-50A4



Dimensions = inches (mm)

Electrical Core Performance

Permeability @ frequency = 10 KHz and Hpeak = 3.0 mA/cm ~30,000

Inspection Value	Measured Value	Measurement Limits	Frequency	L _{eff} * N (mA*turn)	Maximum Asymmetric Current I _{sat} * (Sum Peak Current)
	A _L (μH/N ²)	12.6 - 28.4	10 KHz	30	
	A _L (μH/N ²)	6.3 min	100 KHz	30	

*Saturation Current (Isat) of nanocrystalline material: Peak value of the exiting current when the initial inductance level is dropped to 10 per cent. Saturation behaviour is dependant on frequency, signal shape and leakage field. The current value is a calculated value for design help only and cannot be guaranteed. Isat is calculated @ B = 1.0 T - μnom - N = 1.

Core Finishing

Type:	Plastic Case	Case Material Alternatives:	Zytel FR70G25	Rynite FR530	Longlite 4130	PA66-R11G25
Voltage Breakdown:	2,500 VRMS	Case UL file Number:	E41938	E41938	E59481	E484599

Certification

MH&W International certifies that the manufacturing and the quality process meet all requirements of IEC Part 1: General Specification for "Fixed Inductors For Electromagnetic Interference Suppression", IEC 60938-1:1999 + A1:2006. This International Standard is used in lieu of requirements/documents pertaining to UL, CE, CSA, DIN and other individual agencies. The flame insulation rating meets UL-94V-0.

MH&W International certifies the product described herein is in compliance with the Directive 2011/65/EU of the European Parliament and of the council of 8 June, 2011 on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS2 Directive).

Rev #	Date	Description	Drawing Approval	Drawing Number
3	08/17/17	Initial Issue	Engineering: D. Rollins	CBO43HP1/4-50A4 R4
4	05/03/21	Updated to new datasheet format.	Sales: B. Wilson	

N18HP1/4-10

Product Specification For Inductive Differential Mode Nanotech® Cores



MH&W International Corp.

575 Corporate Drive, Suite 4200, Mahwah, NJ 07430 USA

Phone 201-252-8125 Email: sales@mhw-intl.com

Mechanical Specification

Bare Core Dimensions:

0.98 x 0.79 x 0.39 inch
(25 x 20 x 10 mm)

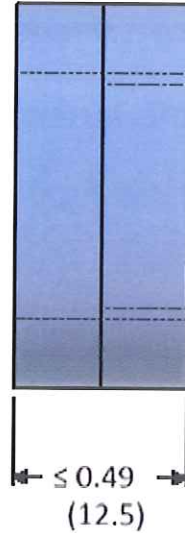
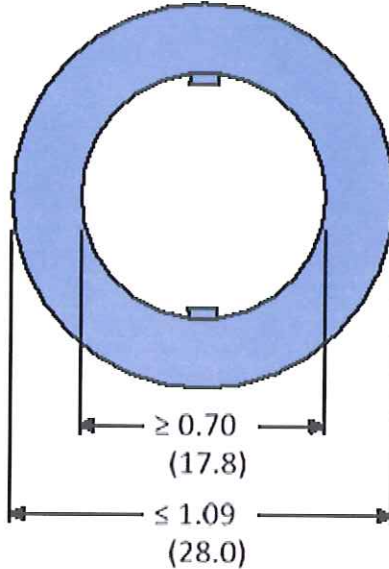
le: 7.1 cm
Ae: 0.20 cm²

Weight: 0.022 lbs (10 grams)

Packing: 63 pc/layer, 6 layers/box
Box Quantity: 378 pieces

Core Material: Nanocrystalline
Currie Temp: 1,112°F (600 °C)
RTI Temp (0.81): 248°F (120°C)

Marking:
N18HP1/4-10



Dimensions = inches (mm)

Electrical Core Performance

Permeability @ frequency = 10 KHz and H_{peak} = 3.0 mA/cm ~90,000

Inspection Value	Measured Value	Measurement Limits	Frequency	L _{eff} * N (mA*turn)
	A _L (μH/N ²)	22.5 - 41.3	10 KHz	15
	A _L (μH/N ²)	5.6 min	100 KHz	15

*Saturation Current (Isat) of nanocrystalline material: Peak value of the exiting current when the initial inductance level is dropped to 10 per cent. Saturation behaviour is dependant on frequency, signal shape and leakage field. The current value is a calculated value for design help only and cannot be guaranteed. Isat is calculated @ B = 1.0 T - μnom - N = 1.

Core Finishing

Type:	Plastic Case	Case Material Alternatives:	Zytel FR70G25	Rynite FR530	Longlite 4130	PA66-R11G25
Voltage Breakdown:	2,500 VRMS	Case UL file Number:	E41938	E41938	E59481	E484599

Certification

MH&W International certifies that the manufacturing and the quality process meet all requirements of IEC Part 1: General Specification for "Fixed Inductors For Electromagnetic Interference Suppression", IEC 60938-1:1999 + A1:2006. This International Standard is used in lieu of requirements/documents pertaining to UL, CE, CSA, DIN and other individual agencies. The flame insulation rating meets UL-94V-0.

MH&W International certifies the product described herein is in compliance with the Directive 2011/65/EU of the European Parliament and of the council of 8 June, 2011 on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS2 Directive).

Rev #	Date	Description	Drawing Approval	Drawing Number
4	08/17/17	Initial Issue	Engineering: D. Rollins	N18HP1/4-10 R5
5	04/05/21	Updated to new datasheet format.	Sales: B. Wilson	