

# M-142 CoolBLUE®

## Product Specification For Inductive Common Mode Choke Components

PS Index	06	Magnetec A/N	12138	Revision #	DATE	Alteration
PS Revision	06	Type:		05/04	2005/07/05	Milled Case
				06/05	2008/11/10	Molded Case - PU = 12 pieces
Core Material: Nanoperm®				06/06	2014/11/12	100KHz lower limit defined

### Mechanical Specification

#### Part Number: M-142

#### Nominal Core Dimensions:

5.24 x 4.09 x 0.79 inch  
(133 x 104 x 20mm)

#### Finished Core Dimensions:

OD1 ≤ 6.77 inch (172mm)  
OD2 ≤ 3.07 inch (78mm)  
ID1 ≥ 5.16 inch (131mm)  
ID2 ≥ 1.46 inch (37mm)  
H ≤ 0.98 inch (25mm)

$$\ell_{\epsilon} = 37.0 \text{ cm}$$

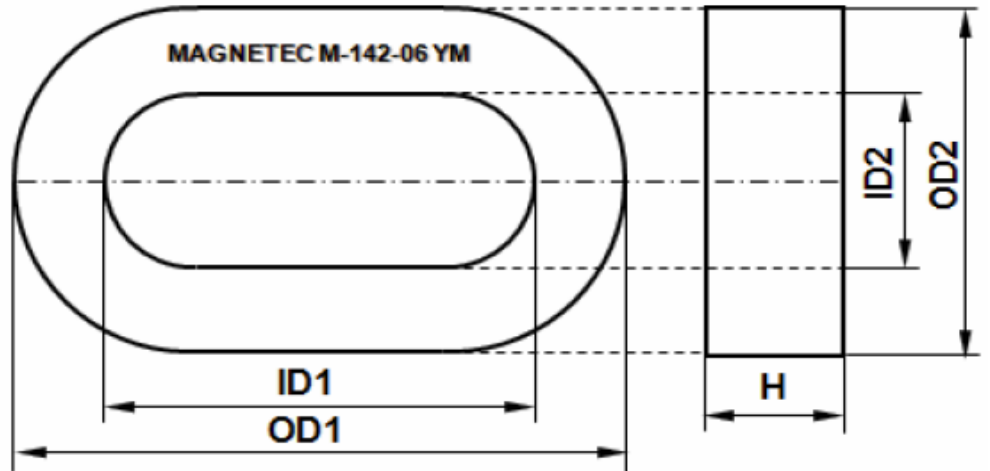
$$A_{\epsilon} = 2.1 \text{ cm}^2$$

Currie Temp = 1,112°F (600 °C)

RTI Temp (0.81) = 248°F (120°C)

Marking: M-142-06 YM: "-06" = Index; "YM" = Year/Month

Packing: 4 pc per layer, 3 layers/box; PU=12 pcs



### Electrical Core Performance

Permeability @ frequency = 10 KHz and H = 3.0 mA/cm					~30,000	Maximum Asymmetric Current $I_{sat}^*$ (Sum Peak Current)
Inspection Value	Measured Value	Measurement Limits	Frequency	$L_{eff} * N$ (mA*turn)		
	$A_{\epsilon}$ ( $\mu\text{H}/\text{N}^2$ )	16.0 - 32.0	10 KHz	80		
	$A_{\epsilon}$ ( $\mu\text{H}/\text{N}^2$ )	8.0 min	100 KHz	80	9.0 A	

\*Saturation Current  $I_{sat}$  of NANOPERM®: 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.  $I_{sat}$  is calculated @  $B = 1.0 \text{ T} - \mu_{nom} - N = 1$ .

### Core Finishing

Type:	BLUE Case	Case material:	Zytel FR70G25 V0 NNC10 with RAL 5012 Blue Pigment
Case UL file Number:	E41938	Voltage Breakdown:	2,500 volts rms between two copper wires on the core

Magnetec GmbH certifies their manufacturing and quality processes meets 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.

Magnetec GmbH 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)

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