



#### Features

- Designed for [TIDA-010957](#) high-power three-phase flying capacitor inverter
- Four-winding design
- Low DCR per winding: 1.5 mΩ typ.
- RoHS compliant\*

#### Applications

- Data centers
- Servers
- String inverters
- On-board chargers (OBC)
- Fast charging stations

#### Sustainability

- High pallet density for lower CO<sub>2</sub>
- Eco-logistics-friendly packing
- High efficiency, low power loss
- ISO 14001, low-impact energy
- Responsibly sourced and produced
- Meets EU 94/62/EC standards

The information provided in this pre-production sample product data sheet is for reference only and is intended to accelerate initial design and prototyping phases. For a tailored, production-ready solution, contact Bourns for further discussion.

#### Product Overview

Bourns® Model MAG-3002585 is a nanocrystalline four-phase line choke developed for high-power three-phase plus neutral inverter architectures. Originally designed for Texas Instruments' [TIDA-010957](#) flying capacitor reference design, this model provides effective differential-mode noise suppression in high-frequency, high-voltage power conversion systems. The Model MAG-3002585 features a

four-winding configuration with low DCR per winding (1.5 mΩ typ.), supporting high efficiency operation while minimizing conduction losses.

Custom configurations are available upon request.

#### Electrical Specifications

Specification	Value
Inductance @ 0 ADC (L1, L2, L3, L4)	2.18 mH
Tolerance	+50 / -35 %
DCR (1) (L1, L2, L3, L4)	1.5 mΩ typ.
Weight	160 g
Hi-Pot (50 Hz and 1 mA leakage max.) Line-Line	2500 VAC, 1 sec.

(1) The TIDA-010957 uses the four-phase choke in differential mode.

#### General Specifications

Specification	Value
Operating Temperature (2) (Including Self-Temperature Rise)	-40 °C to +125 °C
Storage Temperature	-25 °C to +85 °C
Test Frequency / Voltage	10 kHz / 1 V
Measurement Pins	1-2, 3-4, 5-6, 7-8
Moisture Sensitivity Level (MSL)	1

(2) Thermal performance is a critical parameter for this reference design/application.

#### Materials

Specification	Value
Base	Plastic
Core	Nanocrystalline
Wire	Enameled Copper
Terminal Finish	Tin
Glue	Epoxy

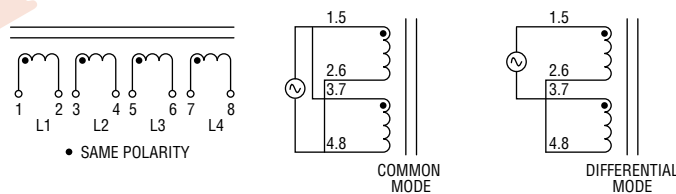
#### How to Order

Model

#### Packaging Specifications

Packaging	Pieces per Box
Box	11

#### Electrical Schematics



#### Contact Information

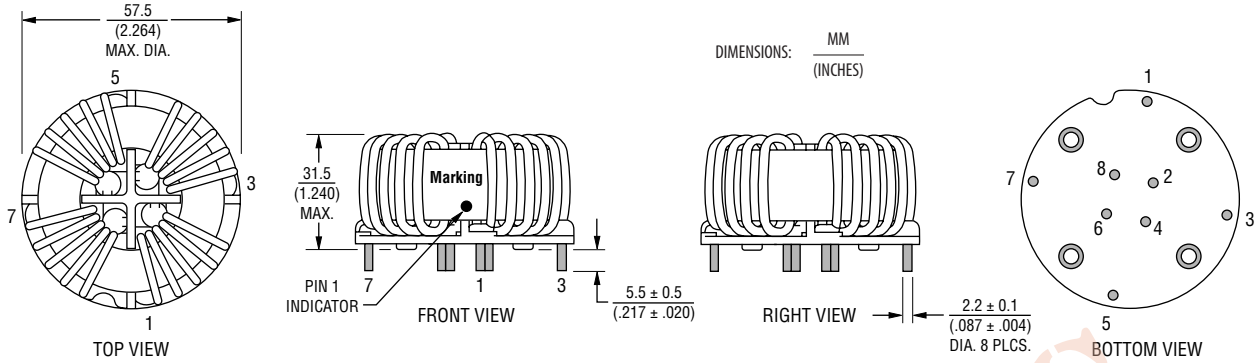
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\* RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications.

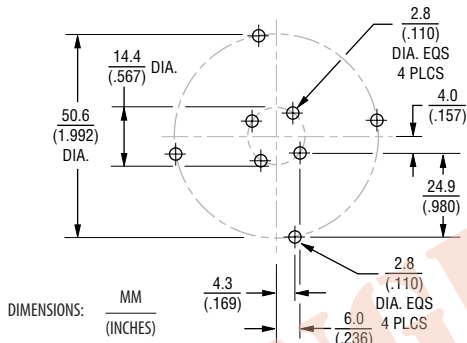
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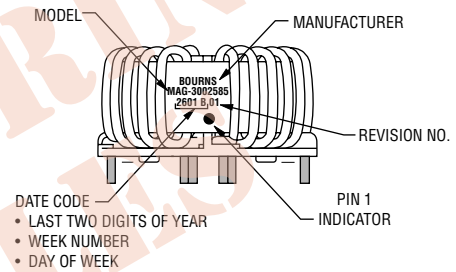
**Product Dimensions**



**Recommended Layout**

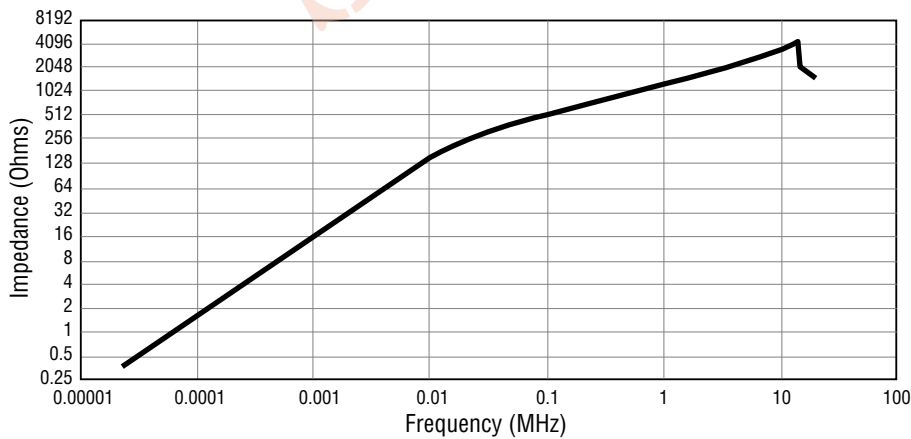


**Typical Part Marking**



**Typical Impedance vs. Frequency Characteristics**

Derived under defined electrical specifications. Impedance measurements are done in alignment with TIDA-010957 reference design, which uses the four-phase choke in differential mode.



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