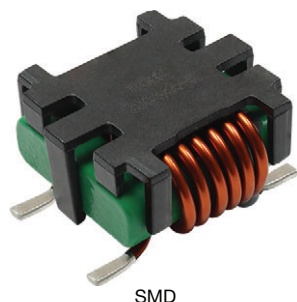
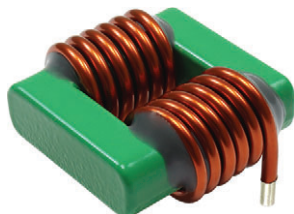


Common Mode Choke, High Current, High Voltage 1.5 kV, Temperature 150 °C

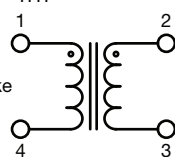


SMD



THT

Common mode choke



FEATURES

- High current common mode choke with SMD and THT terminal options
- Compatible with automated pick and place assembly (SMD design only. THT termination does not include pick and place clip)
- High temperature operation up to 150 °C
- Inductance range from 70 µH to 480 µH (current rating up to 20 A)
- Designed to filter common mode noise from 500 kHz to 10 MHz (up to 5 kΩ impedance)
- Dielectric withstand voltage rated to 1500 V_{DC} between coils
- Customizable for inductance, impedance, DCR and current rating
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

LINKS TO ADDITIONAL RESOURCES



Product Page

MATERIAL SPECIFICATIONS

- Core: ferrite
- Wire: enameled copper
- Pick and place clip: glass fiber enhanced plastic polymer
- Terminal plating: solder dipped tin alloy (Sn99Ag0.3Cu0.7)

APPLICATIONS

- High current and high temperature applications
- DC/DC converters
- EMI Filters
- Motor noise suppression

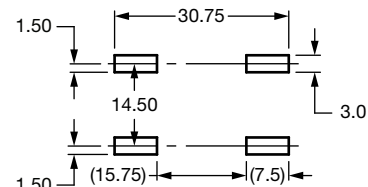
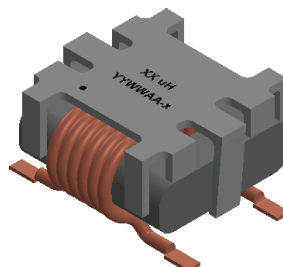
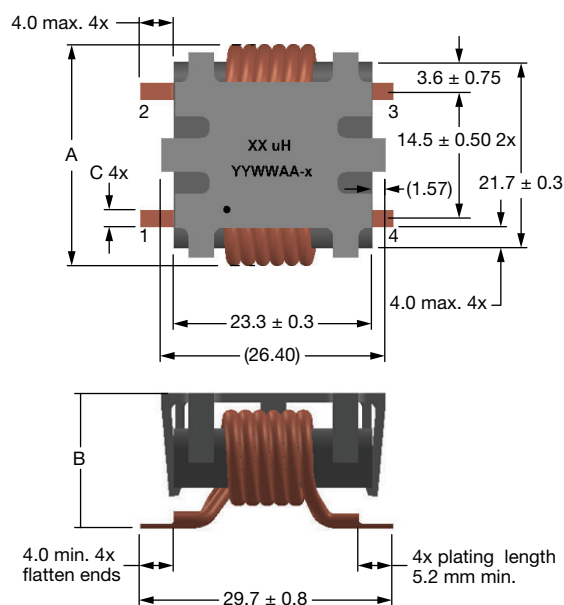
STANDARD ELECTRICAL SPECIFICATIONS

PART NUMBER	L ₀ INDUCTANCE AT 0 A, REF. (µH)	DCR TYP. 25 °C (mΩ)	DCR MAX. 25 °C (mΩ)	COMMON MODE IMPEDANCE ± 30 % TYP. AT 1 MHz (Ω)	COMMON MODE IMPEDANCE ± 30 % TYP. AT 10 MHz (Ω)	COMMON MODE IMPEDANCE ± 30 % TYP. AT 100 MHz (Ω)	HEAT RATING CURRENT DC TYP. (A) ⁽¹⁾		LEAKAGE MAX. (µH)	MOUNT
							40 °C RISE	100 °C RISE		
ICMS2321AGEG700N10	70	1.3	1.5	540	345	220	20	30	1.7	SMD
ICMS2321ABEH700N10	70	1.2	1.3	540	345	220	20	30	1.7	THT
ICMS2321AGEG101N10	100	1.9	2.1	780	600	240	18	26	2.4	SMD
ICMS2321ABEH101N10	100	1.6	1.8	780	600	240	18	26	2.4	THT
ICMS2321AGEG281N10	280	6.6	7.4	2240	1230	380	10	15	6.7	SMD
ICMS2321ABEH281N10	280	6.2	7.0	2240	1230	380	10	15	6.7	THT
ICMS2321AGEG481N10	480	13.4	15.0	3790	1920	410	7	10	11.5	SMD
ICMS2321ABEH481N10	480	12.4	13.9	3790	1920	410	7	10	11.5	THT

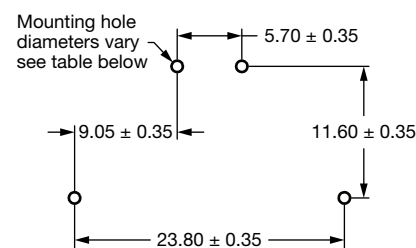
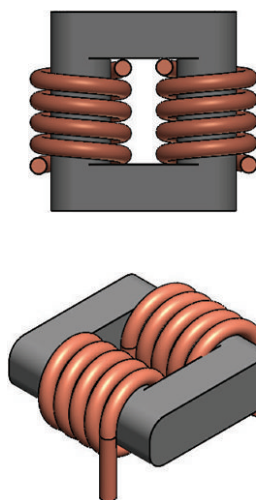
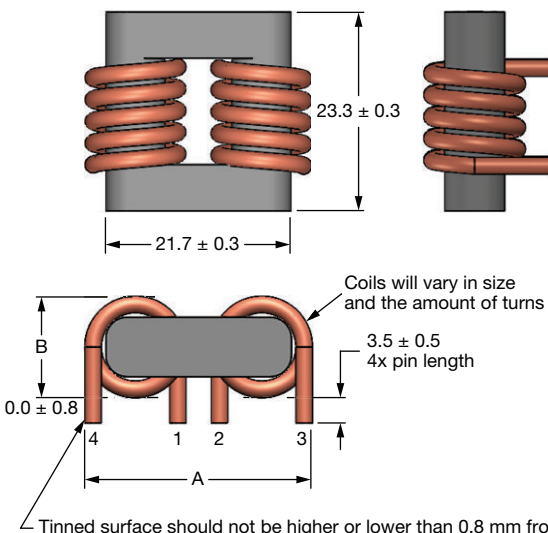
Notes

- All test data is referenced to 25 °C ambient
 - Inductance and impedance test condition: 100 kHz, 0.25 V
 - Operating temperature range -40 °C to +150 °C
 - Dielectric withstand voltage (DWV) rating:
 - Core to coil: 500 V_{DC}, 1 mA max., 2 s
 - Coil to coil: 1500 V_{DC}, 1 mA max., 2 s
- ⁽¹⁾ DC current (A) that will cause an approximate ΔT of 40 °C and 100 °C, respectively

DIMENSIONS in millimeters

SURFACE-MOUNT STYLE ⁽¹⁾

Typical Pad Layout

PART NUMBER	A MAX.	B MAX.	C ± 0.2 mm	WEIGHT (g)
ICMS2321AGEG700N10	27.7	17.5	2.2	17.3
ICMS2321AGEG101N10	27.3	17.2	2.2	26.1
ICMS2321AGEG281N10	26.1	15.65	1.5	19.6
ICMS2321AGEG481N10	25.8	15.5	1.5	17.1

THROUGH-HOLE MOUNT STYLE

Typical Board Pin Layout

PART NUMBER	A MAX.	B MAX.	MOUNTING HOLE DIAMETER	WEIGHT (g)
ICMS2321ABEH700N10	27.7	12.6	2.12	16.0
ICMS2321ABEH101N10	27.3	12.3	1.93	24.8
ICMS2321ABEH281N10	26.1	11.25	1.32	18.3
ICMS2321ABEH481N10	25.8	10.75	1.113	15.8

Note
⁽¹⁾ Coplanarity of four terminals = 0.15 mm max.

GLOBAL PART NUMBER

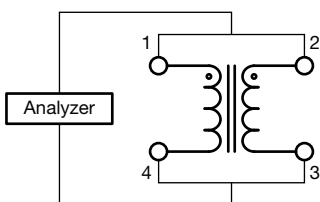
I C M S	2 3 2 1	A G	E G	1 0 1	N	1 0
PRODUCT FAMILY	CORE SIZE	HEIGHT	PACKAGE CODE / MOUNTING	INDUCTANCE	IMPEDANCE TOLERANCE	SERIES
	23 mm x 21 mm	AG = 17 mm AB = 12 mm	EG = surface-mount EH = through-hole	101 = 100 μ H	N = 30 %	

Note

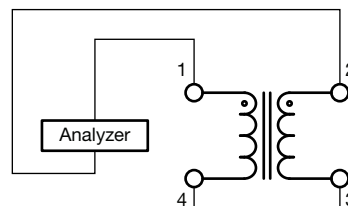
- Packaging type: tray
- For additional packaging details see "[Packaging Methods](#)"

SCHEMATICS

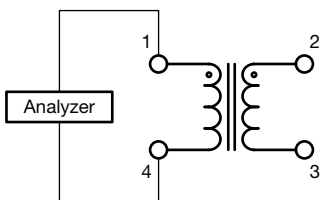
Common Mode Impedance



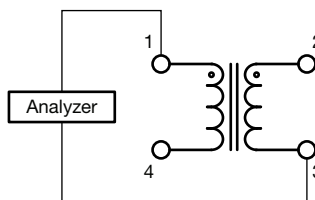
Differential Mode Impedance



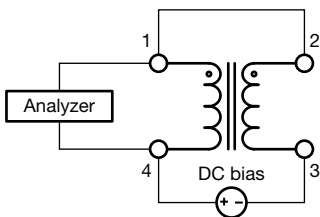
DC Resistance

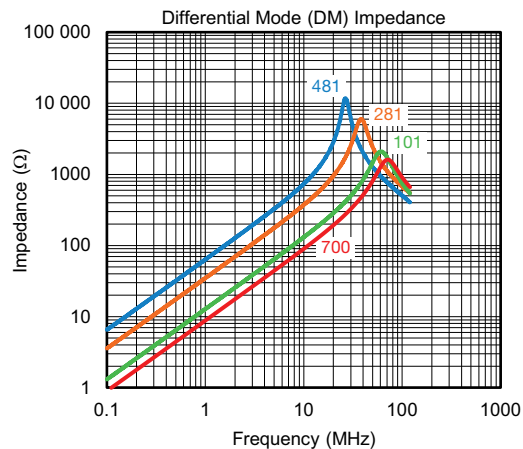
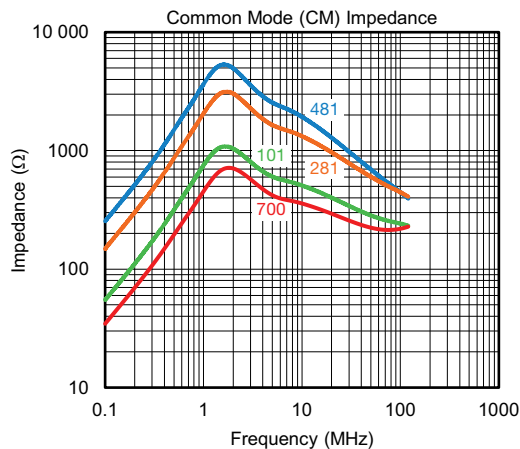
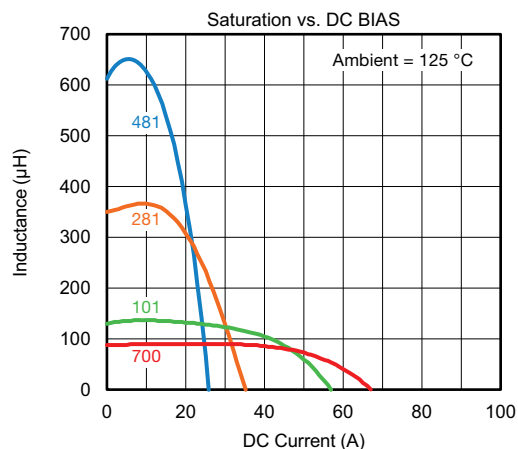
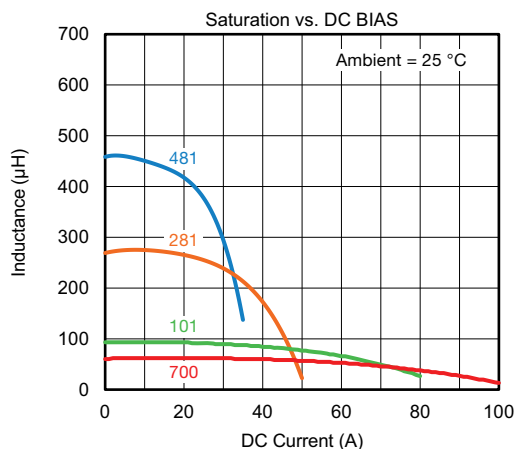
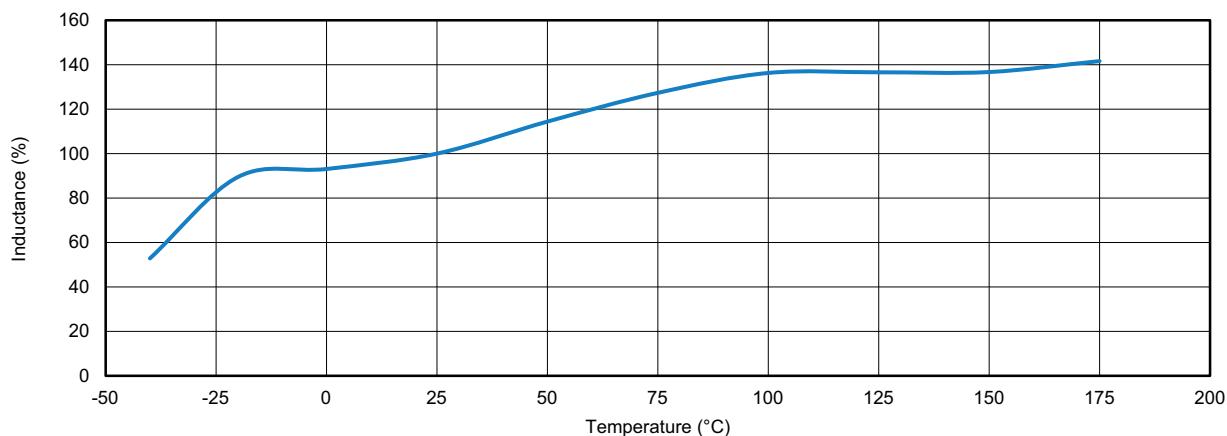


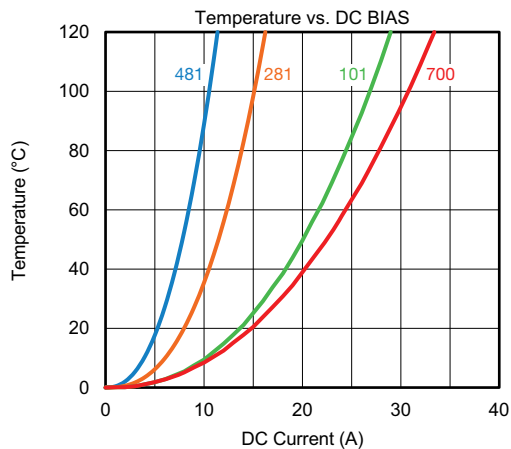
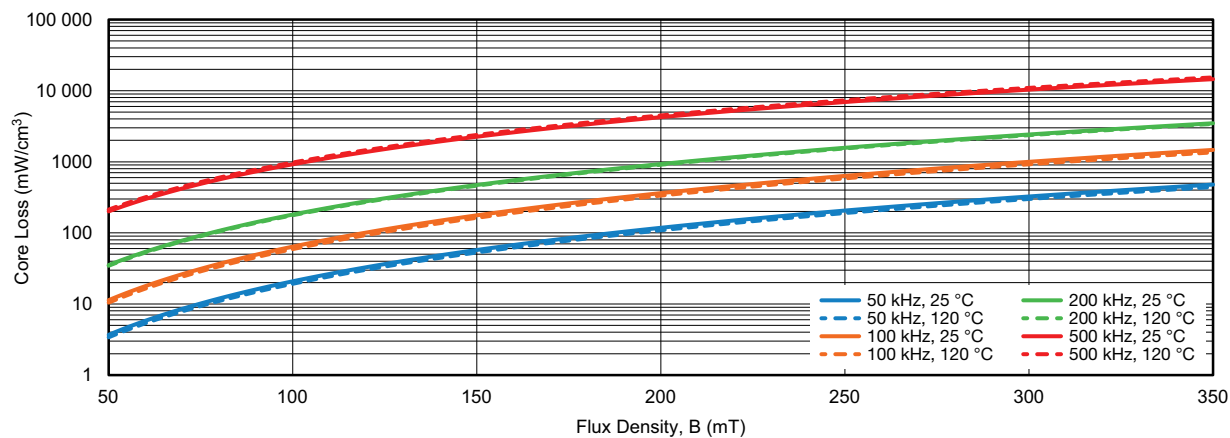
DWV Test (coil to coil)



Saturation Test



PERFORMANCE GRAPHS - FREQUENCY RESPONSE

PERFORMANCE GRAPHS - SATURATION

PERFORMANCE GRAPHS - INDUCTANCE VS. COMPONENT TEMPERATURE


PERFORMANCE GRAPHS - TEMPERATURE RISE

PERFORMANCE GRAPHS - CORE LOSS VS. FLUX DENSITY VS. FREQUENCY VS. TEMPERATURE




Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.