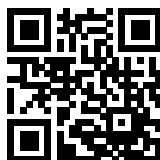
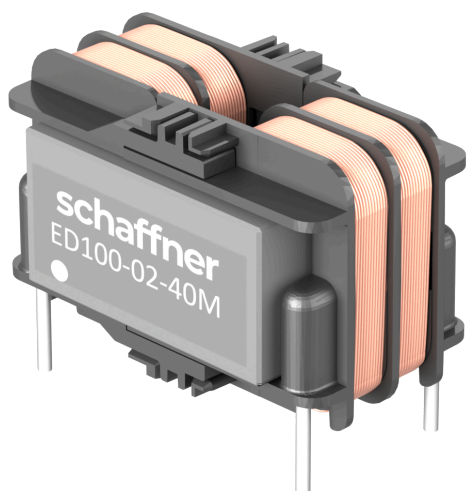
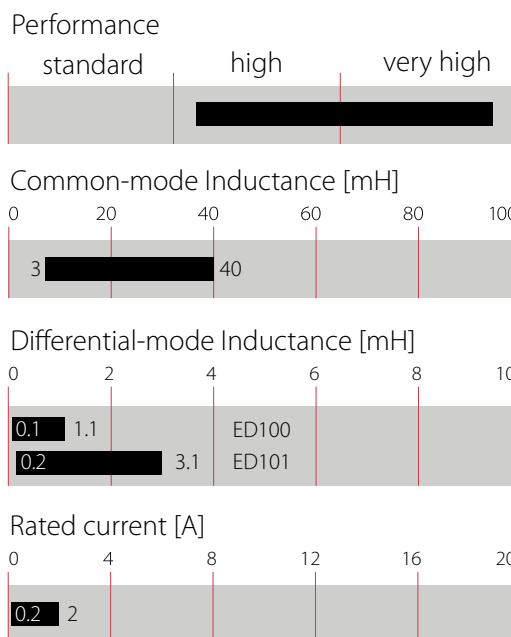


Current-compensated choke series for lighting applications



Performance indicators



Approvals & Compliances

RoHS

Lighting LED drivers need to be high in efficiency, low in cost and compliant to EMC regulations. The ED100 / ED101 series increases the efficiency of a LED driver circuit by reducing the need for X-capacitors. Thus, the power factor rises, and less unwanted reactive power is generated. The inductor is a combination of a strong common-mode inductance with a significant differential-mode inductance. It offers two filtering elements in one component. This helps the circuit designer to reduce the number of elements on the PCB, to reduce space requirement as well as lowering costs. Combined with the high MTBF value of the ED100 / ED101 series, a circuit design with reduced number of components profits for its overall reliability and lifetime.

Features and Benefits

- Increases power factor
- Combination of common- and differential-mode inductances
- Rated currents up to 2 A
- Compact and light-weight
- Small PCB footprint

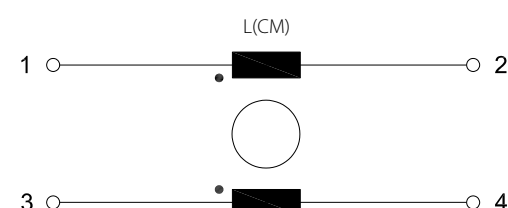
Technical Specifications

Maximum continuous operating voltage	300 VAC, 50/60 Hz
Rated currents	0.2 to 2 A @ 65°C
Rated inductance	3 to 90 MILLIHENRY 3 to 40 mH common-mode
Stray inductance	0.1 - 3.1 mH
Operating frequency	DC to 60 Hz
Temperature range (operation and storage)	-40°C to 125°C
Climatic class	40/125/56 acc. IEC 60068-1
High potential test voltage winding-to-winding @ 25°C	1500 VAC, 2 sec
Creepage and clearance distances	Creepage > 3 mm / Clearance > 2.5 mm between windings
Overvoltage category	II acc. IEC 60664-1
Design corresponding to	IEC 60938-1/-2
Inductance reduction (DC bias with IN)	Less than 10% at rated current
Cooling	AN - natural convection
Flammability corresponding to	UL 94 V-0
Altitude	Derating above 2,000 m
Protection category	IP 00
Pollution degree	PD2 acc. IEC 60664-1
MTBF	> 13,000,000 hours acc. MIL-HDBK-217
Vibration and shock	3M4 acc. IEC 60721-3-3

Typical Applications

- Mains operated LED drivers
- Electronic ballasts
- Input filters for switch mode power supplies

Typical electrical schematic



Choke Selection Table - ED100 - High Differential-Mode Inductance

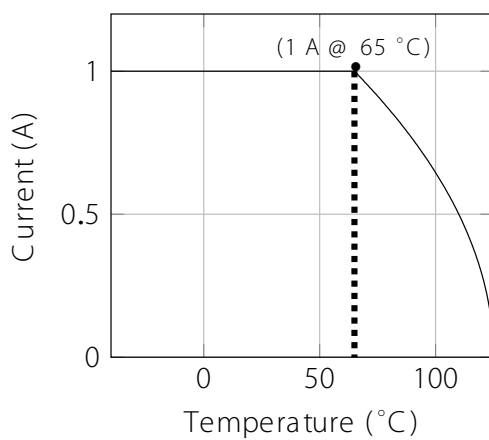
ED100 choke	Buy	Rated current I (@65°C) [A]	Common- Mode Inductance L (CM) (@10kHz) [mH]	Differential- Mode Inductance L (DM) (@10kHz) [mH]	DC resistance R (@25°C) [Ω]	Weight [g]
ED100-0.2-40M		0.2	40	1.1	10.0	10
ED100-0.3-27M		0.3	27	0.8	5.5	10
ED100-0.4-20M		0.4	20	0.6	3.7	10
ED100-0.5-15M		0.5	15	0.4	2.0	10
ED100-0.75-12M		0.75	12	0.3	1.2	11
ED100-1-9M0		1	9	0.3	0.6	12
ED100-1.25-7M0		1.25	7	0.2	0.4	13
ED100-1.5-5M0		1.5	5	0.1	0.3	13
ED100-2-3M0		2	3	0.1	0.2	13

Choke Selection Table - ED101 - Very High Differential-Mode Inductance

ED101 choke	Buy	Rated current I (@65°C) [A]	Common- Mode Inductance L (CM) (@10kHz) [mH]	Differential- Mode Inductance L (DM) (@10kHz) [mH]	DC resistance R (@25°C) [Ω]	Weight [g]
ED101-0.2-40M		0.2	40	3.1	10.0	11
ED101-0.3-27M		0.3	27	2.1	5.5	11
ED101-0.4-20M		0.4	20	1.5	3.7	11
ED101-0.5-15M		0.5	15	1.2	2.0	12
ED101-0.75-12M		0.75	12	0.9	1.2	12
ED101-1-9M0		1	9	0.7	0.6	13
ED101-1.25-7M0		1.25	7	0.5	0.4	14
ED101-1.5-5M0		1.5	5	0.4	0.3	14
ED101-2-3M0		2	3	0.2	0.2	14

Test conditions: Measuring frequency: 10 kHz; 50 mV; Inductance tolerance: +50%, -30%; Resistance tolerance: ±15% @ 25°C; Electrical characteristics @ 25°C: ±2°C; Differential-mode inductance measurement between pin 1 and 2 (pin 3 and 4 shorted)
For mechanical tolerances refer to mechanical data section.

Current Derating



Derating curve normalized to 1 A

Distribution Inventory

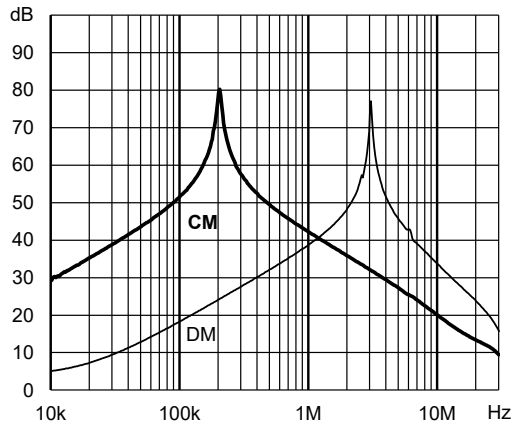
Up-to-date inventory levels for global distributors is available at

<https://products.schaffner.com/stock>

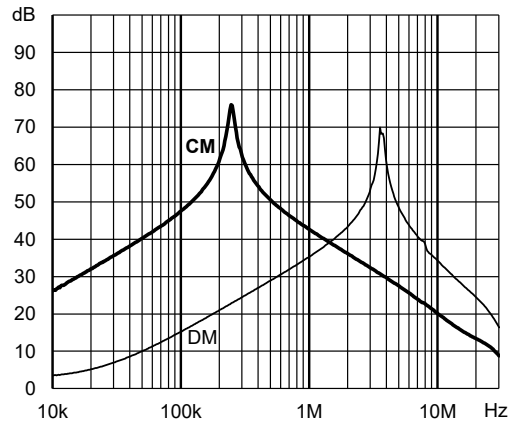


Typical Choke Attenuation - ED100 - High Differential-Mode Inductance

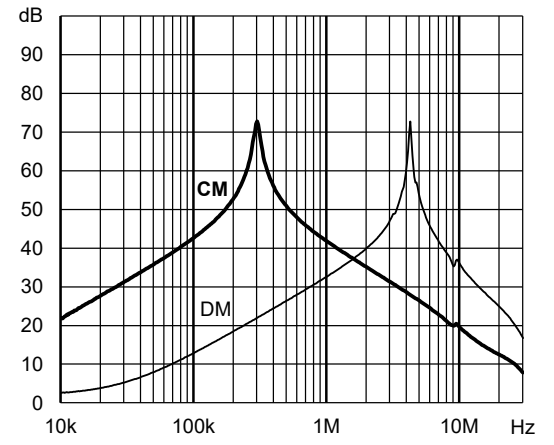
Per CISPR 17; 50 Ω/50 Ω asym



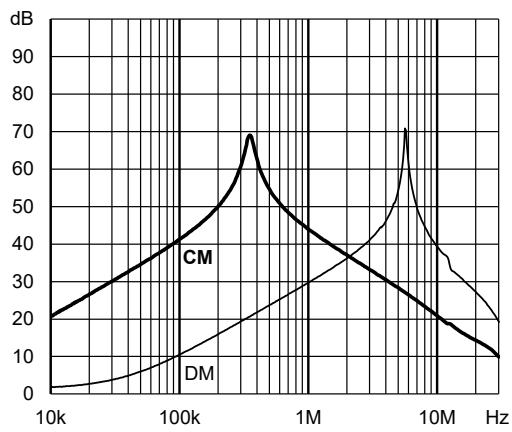
ED100-0.2-40M



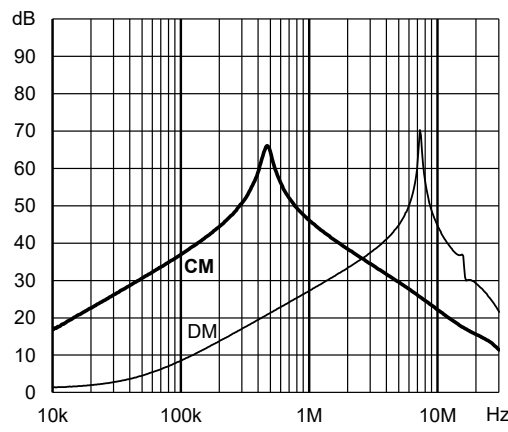
ED100-0.3-27M



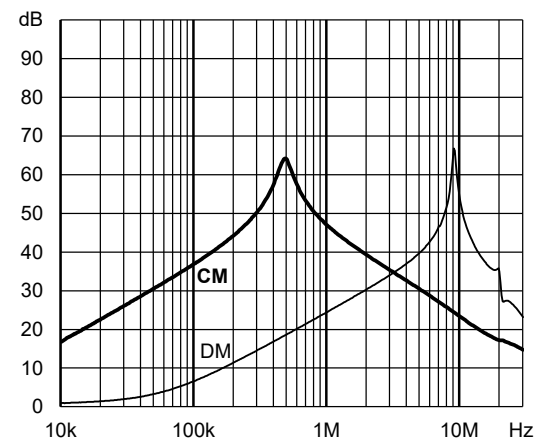
ED100-0.4-20M



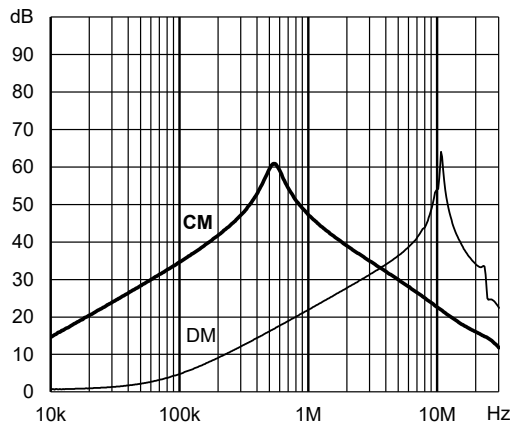
ED100-0.5-15M



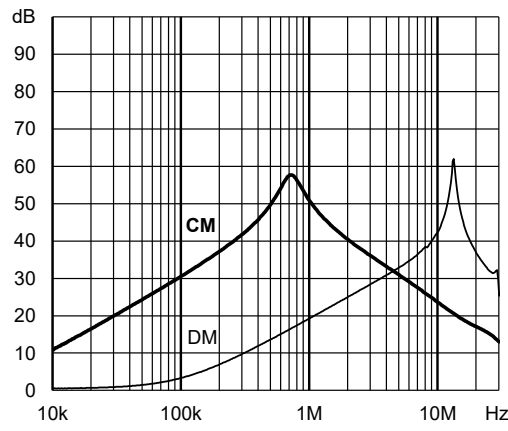
ED100-0.75-12M



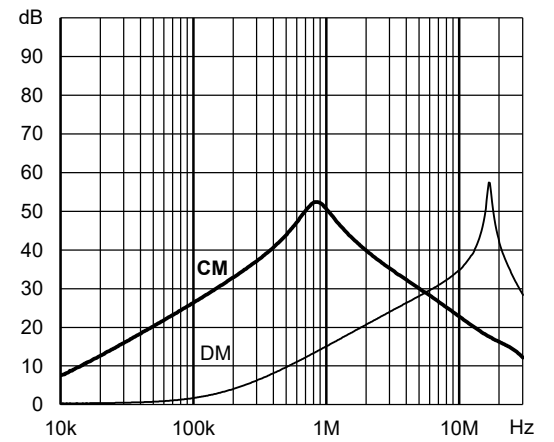
ED100-1-9M0



ED100-1.25-7M0



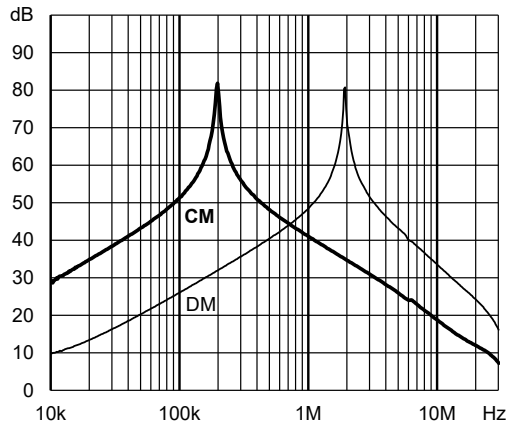
ED100-1.5-5M0



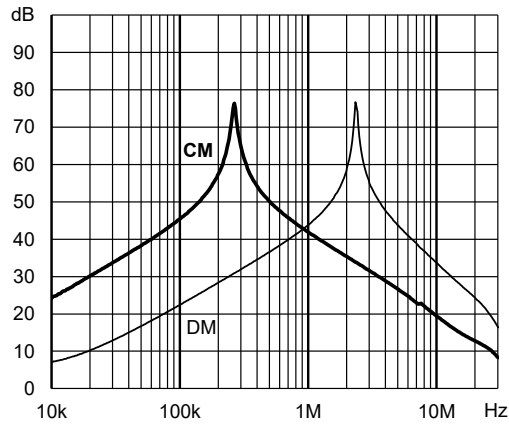
ED100-2-3M0

Typical Choke Attenuation - ED101 - Very High Differential-Mode Inductance

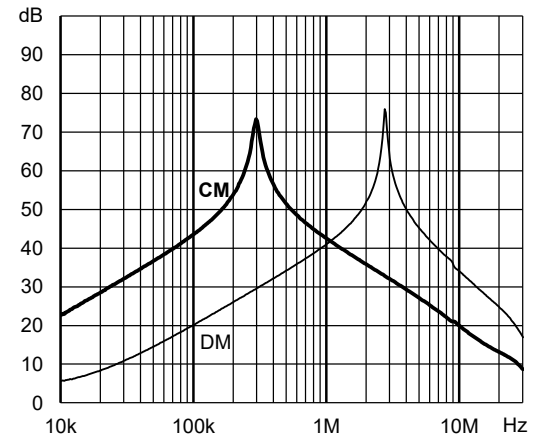
Per CISPR 17; 50 Ω/50 Ω asym



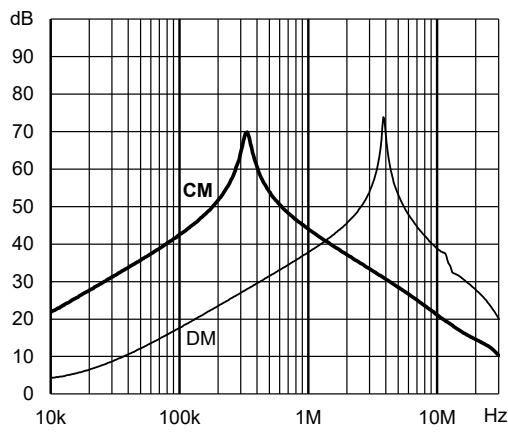
ED101-0.2-40M



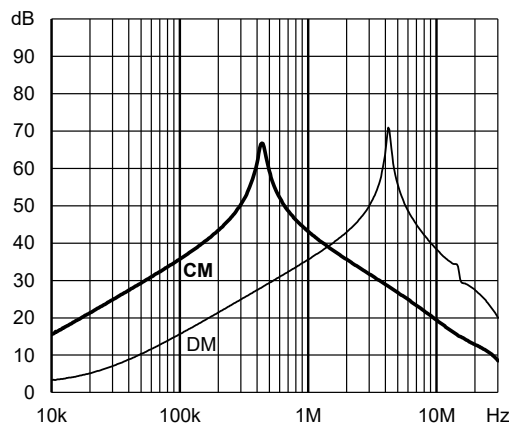
ED101-0.3-27M



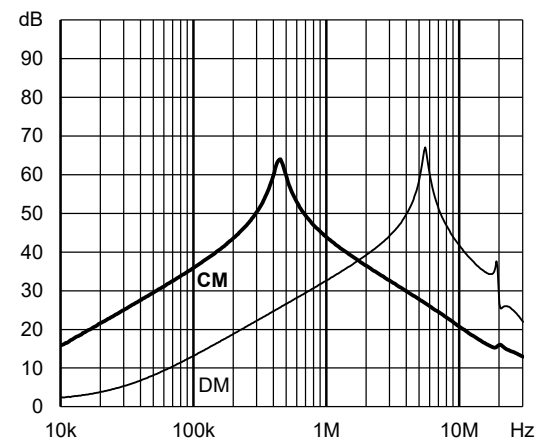
ED101-0.4-20M



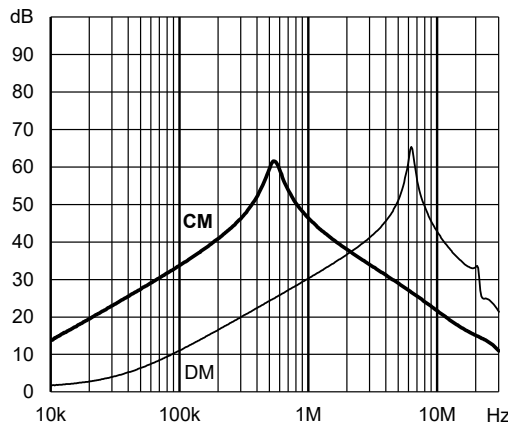
ED101-0.5-15M



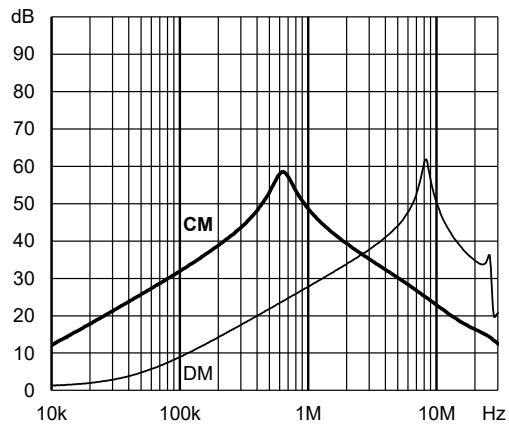
ED101-0.75-12M



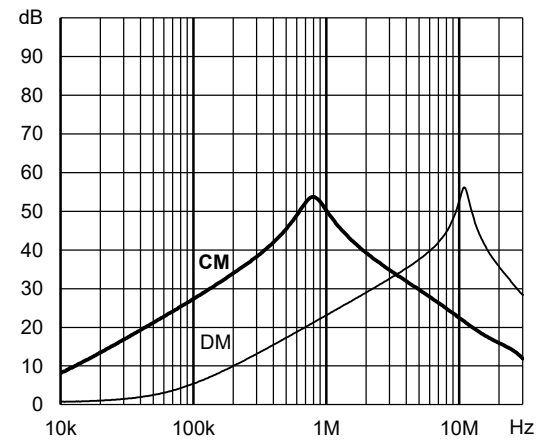
ED101-1-9M0



ED101-1.25-7M0



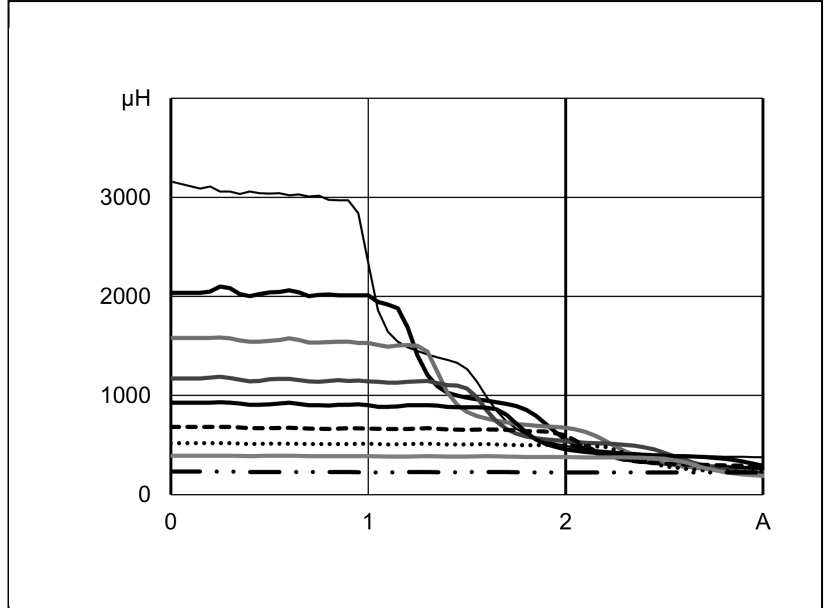
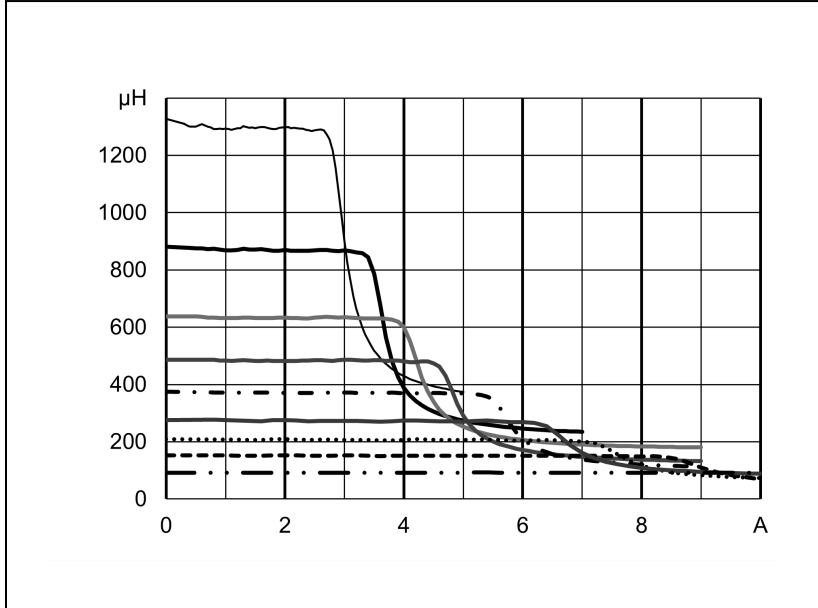
ED101-1.5-5M0



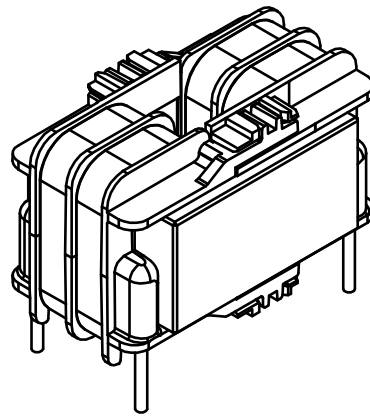
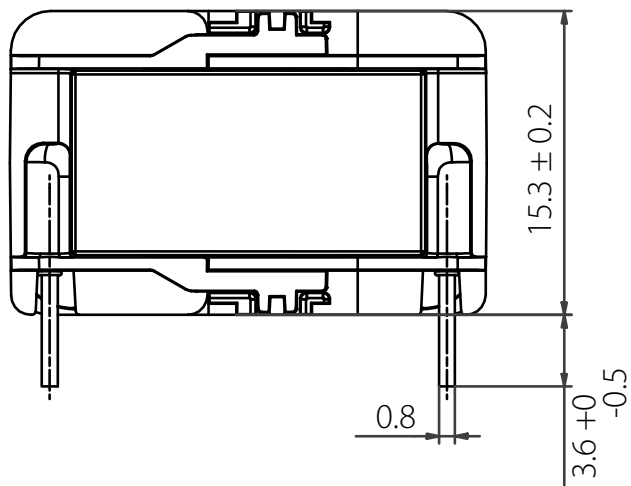
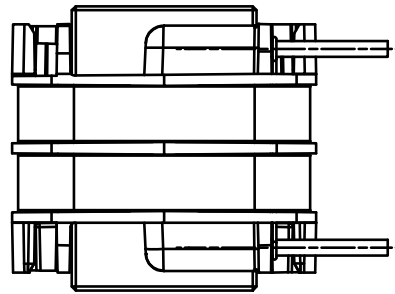
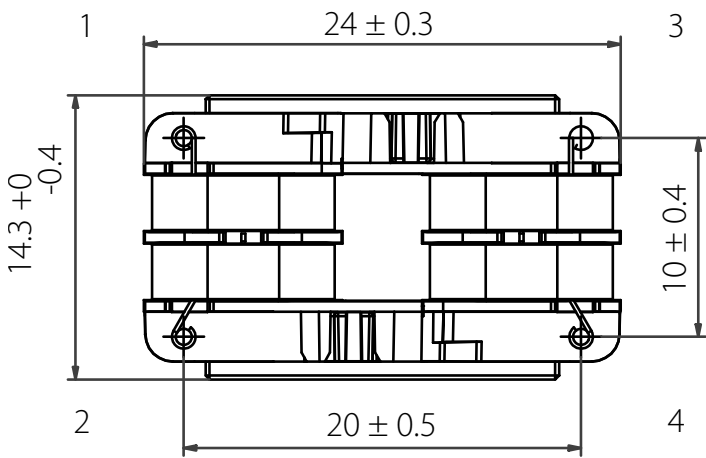
ED101-2-3M0

Differential Mode Saturation

The ED series offers a significant differential-mode inductance with high saturation characteristics.



Mechanical Data - ED100 / ED101



For dimensions [mm] without tolerances: ISO2768-m/EN22768-m applies

Pin material: Steel (base), Cu (under plating), Sn (final plating 6μm)

Pin 1 marked with "dot" on label

Headquarters, Global Innovation and Development

Switzerland

Schaffner Group

Industrie Nord
Nordstrasse 11e
4542
Luterbach
+41 32 681 66 26
info@schaffner.com

Sales and Application Centers

China

Schaffner EMC Ltd. Shanghai

T20-3 C No 565 Chuangye Road Pudong district
201201
Shanghai
+86 2138139500
cschina@schaffner.com

Finland

Schaffner Oy

Sauvonrinne 19 H
8500
Lohja
+358 50 468 7284
finlandsales@schaffner.com

France

Schaffner EMC S.A.S.

16-20 Rue Louis Rameau
95875
Bezons
+33 1 34 34 30 60
francesales@schaffner.com

Germany

Schaffner Deutschland GmbH

Schoemperlenstrasse 12B
76185
Karlsruhe
+49 721 56910
germanysales@schaffner.com

India

Schaffner India Pvt. Ltd

Regus World Trade Centre
WTC 22nd Floor Unit No 2238 Brigade
Gateway Campus 26/1 Dr. Rajkumar Road
Malleshwaram (W)
560055
Bangalore
+91 8067935355
indiasales@schaffner.com

Italy

Schaffner EMC S.r.l.

Via Ticino, 30
20900
Monza (MB)
+39 039 21 41 070
italysales@schaffner.com

United States

Schaffner EMC Inc.

52 Mayfield Avenue
Edison, New Jersey
+1 732 225 9533
usasales@schaffner.com

Japan

Schaffner EMC K.K.

ISM Sangenjaya 7F
1-32-12 Kamiyama Setagaya-ku
154-0011
Tokyo
+81 3 5712 3650
japansales@schaffner.com

Spain

Schaffner EMC España

Calle Caléndula 93 Miniparc III Edificio E El Soto de Moraleja Alcobendas
28109
Madrid
+34 917 912 900
spainsales@schaffner.com

Sweden

Schaffner EMC AB

Östermalmstrorg 1
114 42
Stockholm
+46 8 5050 2425
swedensales@schaffner.com

Switzerland

Schaffner EMV AG

Industrie Nord
Nordstrasse 11e
4542
Luterbach
+41 32 681 66 26
switzerlandsales@schaffner.com

Taiwan

Schaffner EMV Ltd.

U-Town
20 Floor-2 No 97 Section 1 XinTai 5th Road
XiZhi District
22175
New Taipei City
+886 226975500
taiwansales@schaffner.com

Thailand

Schaffner EMC Co. Ltd.

Sathorn Square Tower
Room 3780 37FL 98 North-Sathorn Rd Silom
Bangrak
10500
Bangkok
+66 621056397
thailandsales@schaffner.com

United Kingdom

Schaffner Ltd.

Suite 1 Oakmede Place
Terrace Road
RG42 4JF
Binfield
+44 118 9770070
uksales@schaffner.com

Singapore

Schaffner EMC Pte Ltd.

Blk 3015A Ubi Road 1 #05-09 Kampong Ubi Industrial Estate
408705
Singapore
+65 63773283
singaporesales@schaffner.com

To find your local partner within Schaffner's global network schaffner.com

© 2022 Schaffner Group

The content of this document has been carefully checked and understood. However, neither Schaffner nor its subsidiaries assume any liability whatsoever for any errors or inaccuracies of this document and the consequences thereof. Published specifications are subject to change without notice. Product suitability for any area of application must ultimately be determined by the customer. In all cases, products must never be operated outside their published specifications. Schaffner does not guarantee the availability of all published products. This disclaimer shall be governed by substantive Swiss law and resulting disputes shall be settled by the courts at the place of business of Schaffner Holding AG. Latest publications and a complete disclaimer can be downloaded from the Schaffner website. All trademarks recognized.