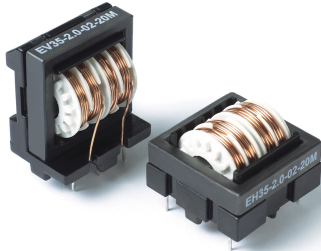


# Common-mode Suppression Chokes



- Rated currents up to 5 A
- Broadband attenuation characteristics
- Low magnetic leakage flux
- UL rated materials
- RoHS compliant



## Approvals & Compliances



Common-mode suppression chokes are mainly used to filter noise on AC power lines. Noise on commercial power lines could enter the equipment and disturb the proper function. Noise generated by the equipment for example from switch mode power supplies need to be filtered and the spread of such generated noise need to be suppressed. Common-mode suppression chokes together with line bypass capacitors building an AC EMI suppression filter device.

## Technical specifications

<b>Maximum continuous operating voltage</b>	250 VAC @ 50°C
<b>Operating frequency</b>	DC to 400 Hz
<b>Rated currents</b>	0.3 to 5 A
<b>Overcurrent</b>	1.5x Inominal for 1 minute, once per hour
<b>winding-to-winding @ 25°C</b>	3000 VAC, 60 sec, guaranteed 2000 V, 50 Hz, 2 sec, factory test
<b>Temperature range (operation and storage)</b>	-25°C to +100°C (25/100/21)
<b>Flammability corresponding to</b>	UL 94 V-0
<b>Measuring frequency</b>	10 kHz; 5 mA <16 µH; 500 µA >16 µH <160 µH; 50 µA >160 µH >16 mH; 50 mV >16 mH <160 mH Inductance tolerance ±30%
<b>Resistance</b>	Tolerance max. ±15% @ 25°C; ≤20 mΩ, 1 A; >20 mΩ ≤200 mΩ, 100 mA; >200 mΩ ≤2 V, 10 mA
<b>Electrical characteristics</b>	@ 25°C ±2°C
<b>MTBF @ 40°C/230 V (Mil-HB-217F)</b>	>5,000,000 hours

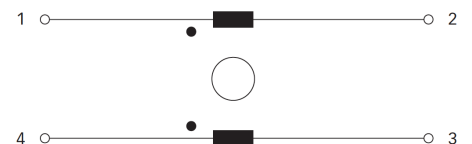
## Features and benefits

- Rated currents up to 5 A
- Compact and light weight
- Low magnetic leakage flux
- Sectional winding
- Standard foot print
- Broad range of available inductances and current ratings
- Custom-specific versions
- Schaffner offers you also EMI measurement service to verify that your design will pass the required safety standards

## Typical applications

- Input filters for switch mode power supplies
- Filters to reduce leaking noise
- TVs, VCRs, multimedia and audio equipment
- Office automation, communications and other electronic devices
- Electric ballast
- AC/AC converters

## Typical electrical schematic



## Choke selection table

EH choke	Buy (EH)	EV choke	Buy (EV)	L nominal (±30%) [mH]	DC resistance R [mΩ]	Rated current I (50°C) [A]	Weight [g]
EH20-0.3-02-33M		EV20-0.3-02-33M		33	1780	0.3	10
EH20-0.5-02-18M		EV20-0.5-02-18M		18	725	0.5	10
EH20-0.8-02-5M6		EV20-0.8-02-5M6		5.6	245	0.8	10
EH20-1.0-02-3M9		EV20-1.0-02-3M9		3.9	168	1.0	10
EH20-1.2-02-3M3		EV20-1.2-02-3M3		3.3	127	1.2	10
EH20-1.5-02-1M8		EV20-1.5-02-1M8		1.8	72	1.5	10
EH20-2.0-02-0M8		EV20-2.0-02-0M8		0.82	38	2.0	10
EH24-0.5-02-44M		EV24-0.5-02-44M		44	1250	0.5	18
EH24-0.8-02-18M		EV24-0.8-02-18M		18	438	0.8	18
EH24-1.0-02-10M		EV24-1.0-02-10M		10	244	1.0	18
EH24-1.5-02-4M5		EV24-1.5-02-4M5		4.5	116	1.5	18
EH24-2.0-02-2M5		EV24-2.0-02-2M5		2.5	62	2.0	18
EH24-3.0-02-1M2		EV24-3.0-02-1M2		1.2	29	3.0	18
EH24-4.0-02-0M5		EV24-4.0-02-0M5		0.5	16	4.0	18
EH28-1.0-02-75M-X				75	880	1.0	31
EH28-1.0-02-36M		EV28-1.0-02-36M		36	591	1.0	31
EH28-1.5-02-27M-X		EV28-1.5-02-27M-X		27	282	1.5	31
EH28-1.5-02-20M		EV28-1.5-02-20M		20	282	1.5	31
EH28-2.0-02-15M-X				15	196	2.0	33
EH28-2.0-02-11M		EV28-2.0-02-11M		11	162	2.0	31
EH28-3.0-02-9M0-X		EV28-3.0-02-9M0-X		9	115	3.0	31
EH28-3.0-02-5M0		EV28-3.0-02-5M0		5	79	3.0	31
EH28-4.0-02-3M5-X				3.5	52	4.0	31
EH28-4.0-02-2M3		EV28-4.0-02-2M3		2.3	40	4.0	31
EH28-5.0-02-1M1		EV28-5.0-02-1M1		1.1	27	5.0	31
EH35-1.0-02-90M		EV35-1.0-02-90M		90	628	1.0	70
EH35-2.0-02-20M		EV35-2.0-02-20M		20	150	2.0	70
EH35-3.0-02-10M		EV35-3.0-02-10M		10	72	3.0	70
EH35-4.0-02-5M0		EV35-4.0-02-5M0		5	53	4.0	70
EH35-5.0-02-3M6		EV35-5.0-02-3M6		3.6	33	5.0	70

All wires rated 130°C or higher.

## Distribution inventory

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

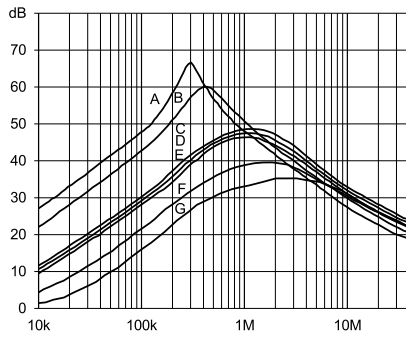
<https://products.schaffner.com/stock>



## Typical choke attenuation

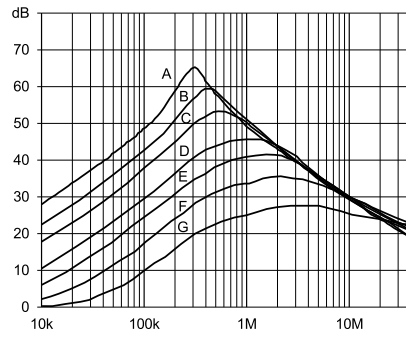
Per CISPR 17; 50 Ω/50 Ω asym

EV/EH 20 types



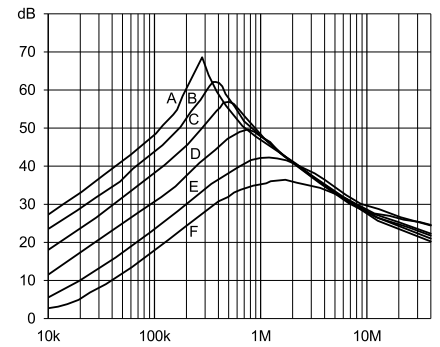
A = 33 mH; B = 18 mH; C = 5.6 mH  
 D = 3.9 mH; E = 3.3 mH; F = 1.8 mH  
 G = 0.8 mH

EV/EH 24 types



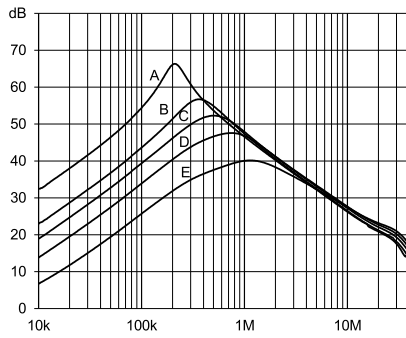
A = 44 mH; B = 18 mH; C = 10 mH  
 D = 5.5 mH; E = 2.5 mH; F = 1.2 mH  
 G = 0.5 mH

EV/EH 28 types



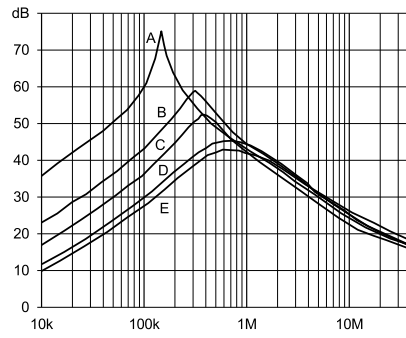
A = 36 mH; B = 20 mH; C = 11 mH  
 D = 5 mH; E = 2.3 mH; F = 1.1 mH

EV/EH 28 X types



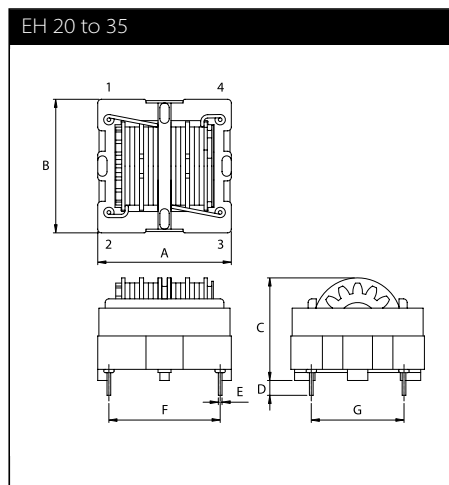
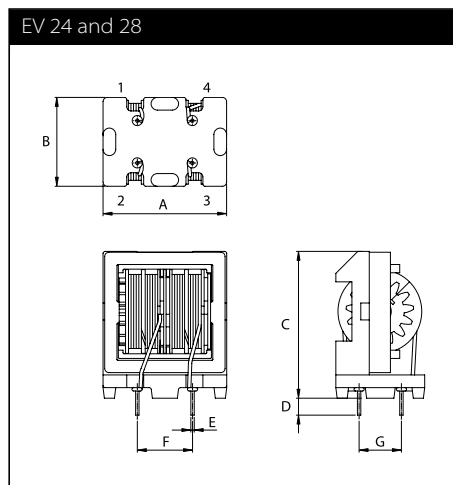
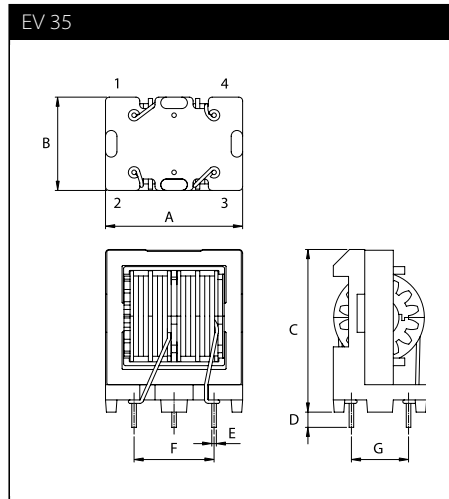
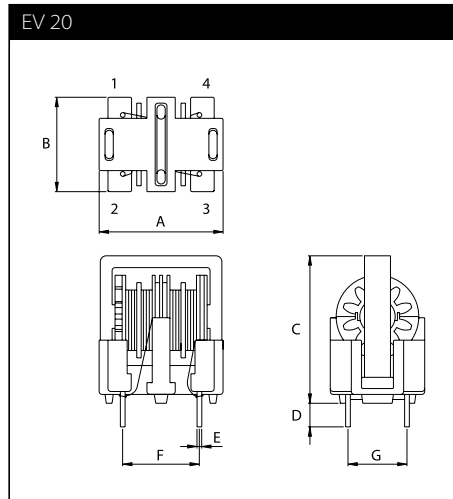
A = 75 mH; B = 27 mH; C = 15 mH  
 D = 9 mH; E = 3.5 mH

EV/EH 35 types



A = 90 mH; B = 20 mH; C = 10 mH  
 D = 5 mH; E = 3.6 mH

## Mechanical data



## Dimensions

	EV 20	EV 24	EV 28	EV 35	EH 20	EH 24	EH 28	EH35	Tolerances
<b>A</b>	21	24.6	29.2	36	21	24	28	36	±1
<b>B</b>	16	17.4	21	25.5	21	24	28	36	±1
<b>C</b>	25*	29.1	34.7	42.7	17.8	20	22.9	27.7	±1
<b>D</b>	4	4	4	4	4	4	4	4	±1
<b>E</b>	Ø0.8	Ø0.8	Ø0.8	Ø1.2	Ø0.8	Ø0.8	Ø0.8	Ø1.0	±0.1
<b>F</b>	13	13	13	21	13	21	24	30	±0.5
<b>G</b>	10	10	10	15	10	15	20	25	±0.5

All dimensions in mm; 1 inch = 25.4 mm

\* Tolerance is +1/-2 mm

Please visit [www.schaffner.com](http://www.schaffner.com) to find more details on filter connectors.



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