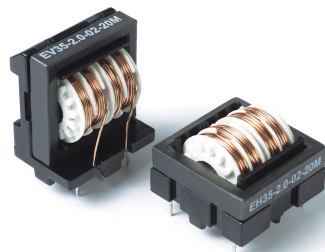


Common-mode Suppression Chokes



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



Technical specifications

Maximum continuous operating voltage	250 VAC @ 50°C
Operating frequency	DC to 400 Hz
Rated currents	0.3 to 5 A
Overcurrent	1.5x Inominal for 1 minute, once per hour
winding-to-winding @ 25°C	3000 VAC, 60 sec, guaranteed 2000 V, 50 Hz, 2 sec, factory test
Temperature range (operation and storage)	-25°C to +100°C (25/100/21)
Flammability corresponding to	UL 94 V-0
Measuring frequency	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%
Resistance	Tolerance max. ±15% @ 25°C; ≤20 mΩ, 1 A; >20 mΩ ≤200 mΩ, 100 mA; >200 mΩ ≤2 V, 10 mA
Electrical characteristics	@ 25°C ±2°C

Approvals

ROHS

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.

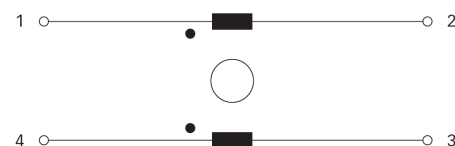
Features and benefits

- 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

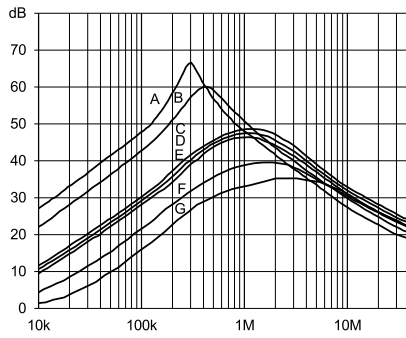
EH choke	EV choke	L nominal (±30%) [mH]	DC resistance R [mΩ]	Rated current I (50°C) [A]	Weight [g]
EH 20-0.3-02-33M	EV 20-0.3-02-33M	33	1780	0.3	10
EH 20-0.5-02-18M	EV 20-0.5-02-18M	18	725	0.5	10
EH 20-0.8-02-5M6	EV 20-0.8-02-5M6	5.6	245	0.8	10
EH 20-1.0-02-3M9	EV 20-1.0-02-3M9	3.9	168	1.0	10
EH 20-1.2-02-3M3	EV 20-1.2-02-3M3	3.3	127	1.2	10
EH 20-1.5-02-1M8	EV 20-1.5-02-1M8	1.8	72	1.5	10
EH 20-2.0-02-0M8	EV 20-2.0-02-0M8	0.82	38	2.0	10
EH 24-0.5-02-44M	EV 24-0.5-02-44M	44	1250	0.5	18
EH 24-0.8-02-18M	EV 24-0.8-02-18M	18	438	0.8	18
EH 24-1.0-02-10M	EV 24-1.0-02-10M	10	244	1.0	18
EH 24-1.5-02-4M5	EV 24-1.5-02-4M5	4.5	116	1.5	18
EH 24-2.0-02-2M5	EV 24-2.0-02-2M5	2.5	62	2.0	18
EH 24-3.0-02-1M2	EV 24-3.0-02-1M2	1.2	29	3.0	18
EH 24-4.0-02-0M5	EV 24-4.0-02-0M5	0.5	16	4.0	18
EH 28-1.0-02-75M-X		75	880	1.0	31
EH 28-1.0-02-36M	EV 28-1.0-02-36M	36	591	1.0	31
EH 28-1.5-02-27M-X	EV 28-1.5-02-27M-X	27	282	1.5	31
EH 28-1.5-02-20M	EV 28-1.5-02-20M	20	282	1.5	31
EH 28-2.0-02-15M-X		15	196	2.0	33
EH 28-2.0-02-11M	EV 28-2.0-02-11M	11	162	2.0	31
EH 28-3.0-02-9M0-X	EV 28-3.0-02-9M0-X	9	115	3.0	31
EH 28-3.0-02-5M0	EV 28-3.0-02-5M0	5	79	3.0	31
EH 28-4.0-02-3M5-X		3.5	52	4.0	31
EH 28-4.0-02-2M3	EV 28-4.0-02-2M3	2.3	40	4.0	31
EH 28-5.0-02-1M1	EV 28-5.0-02-1M1	1.1	27	5.0	31
EH 35-1.0-02-90M	EV 35-1.0-02-90M	90	628	1.0	70
EH 35-2.0-02-20M	EV 35-2.0-02-20M	20	150	2.0	70
EH 35-3.0-02-10M	EV 35-3.0-02-10M	10	72	3.0	70
EH 35-4.0-02-5M0	EV 35-4.0-02-5M0	5	53	4.0	70
EH 35-5.0-02-3M6	EV 35-5.0-02-3M6	3.6	33	5.0	70

All wires rated 130°C or higher.

Typical choke attenuation

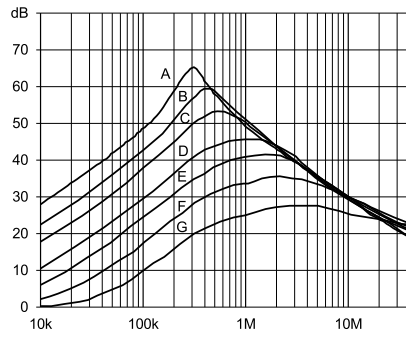
Per CISPR 17; 50 Ω/50 Ω asym

EV/EH 20 types



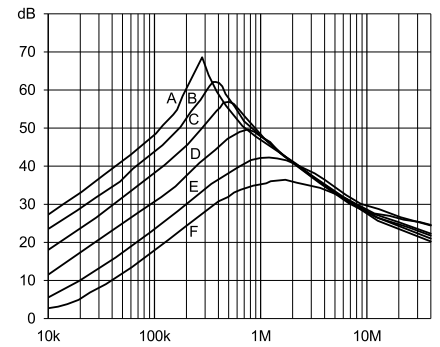
A = 33 mH; B = 18 mH; C = 5.6 mH
 D = 3.9 mH; E = 3.3 mH; F = 1.8 mH
 G = 0.8 mH

EV/EH 24 types



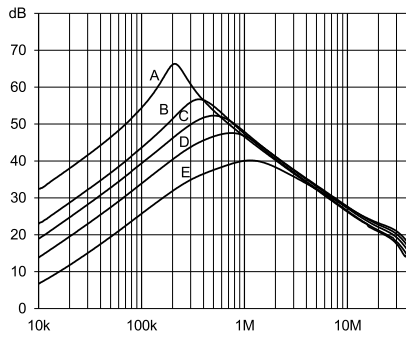
A = 44 mH; B = 18 mH; C = 10 mH
 D = 5.5 mH; E = 2.5 mH; F = 1.2 mH
 G = 0.5 mH

EV/EH 28 types



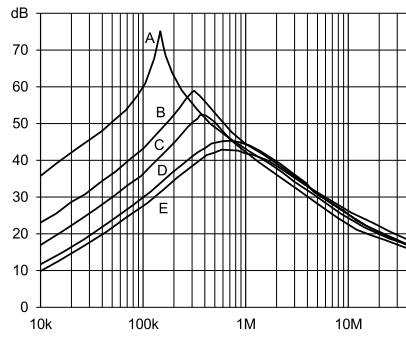
A = 36 mH; B = 20 mH; C = 11 mH
 D = 5 mH; E = 2.3 mH; F = 1.1 mH

EV/EH 28 X types



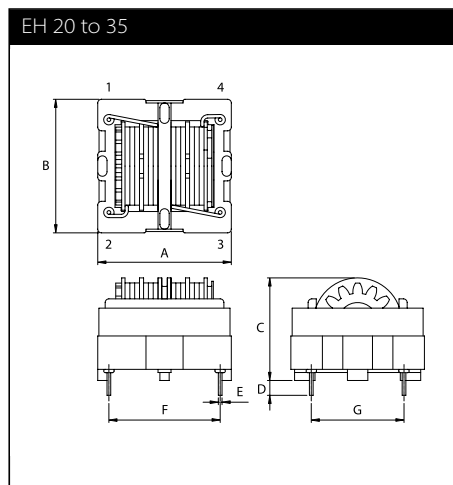
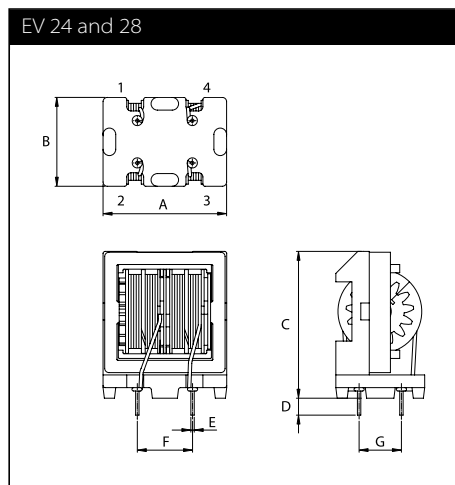
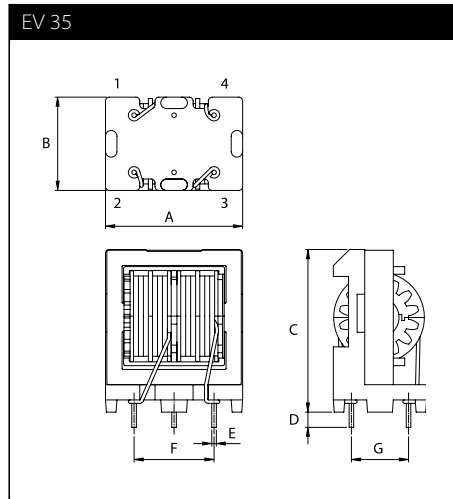
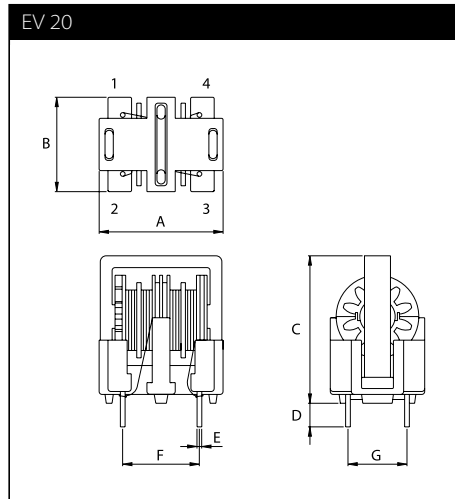
A = 75 mH; B = 27 mH; C = 15 mH
 D = 9 mH; E = 3.5 mH

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
A	21	24.6	29.2	36	21	24	28	36	±1
B	16	17.4	21	25.5	21	24	28	36	±1
C	25*	29.1	34.7	42.7	17.8	20	22.9	27.7	±1
D	4	4	4	4	4	4	4	4	±1
E	Ø0.8	Ø0.8	Ø0.8	Ø1.2	Ø0.8	Ø0.8	Ø0.8	Ø1.0	±0.1
F	13	13	13	21	13	21	24	30	±0.5
G	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 to find more details on filter connectors.



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