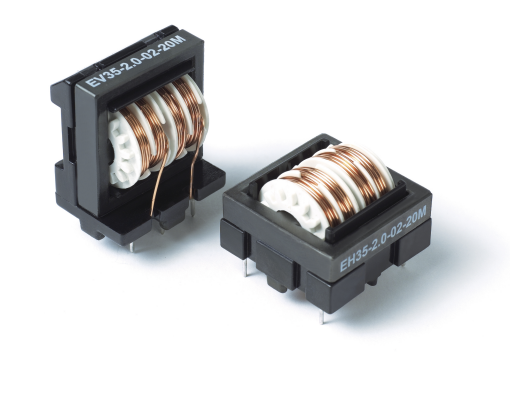


# Common-mode Suppression Chokes



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



## Approvals & Compliances

### 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.

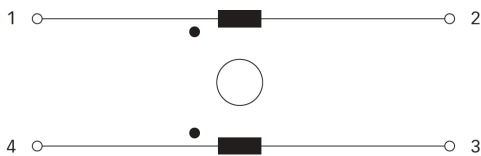
### Features and Benefits

- 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 measure- ment 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<br>(EH)                                                                         | EV choke          | Buy<br>(EV)                                                                         | L nominal<br>(±30%)<br>[mH] | DC resistance<br>R<br>[mΩ] | Rated current<br>I (50°C)<br>[A] | Weight<br>[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

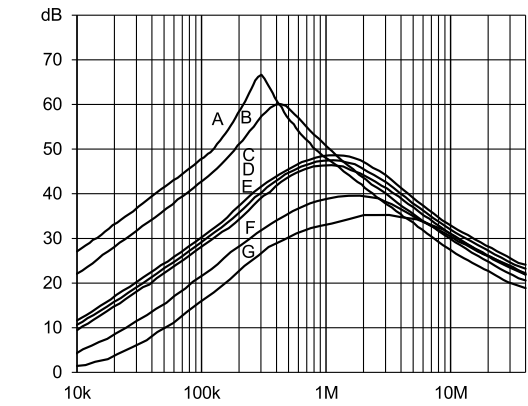
<https://products.schaffner.com/stock>



Typical Choke Attenuation

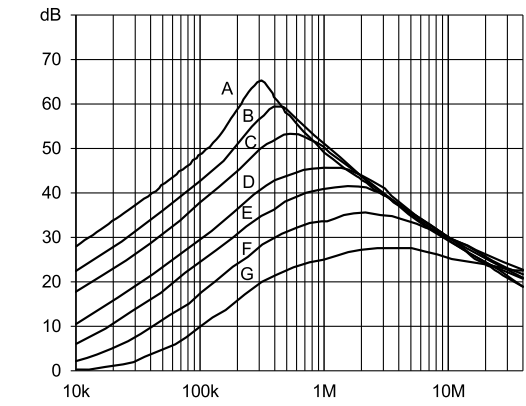
Per CISPR 17; 50 Ω/50 Ω asym

EV/EH 20 types



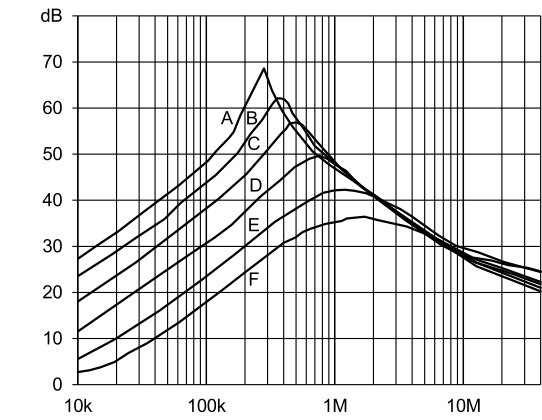
A = 33 mH; B = 18 mH; C = 5.6 mH  
D = 3.9 mH; E = 3.3 mH; F = 1.8 mH  
G = 0.8 mH

EV/EH 24 types



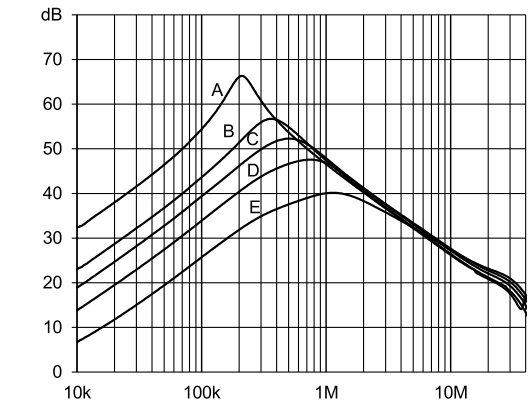
A = 44 mH; B = 18 mH; C = 10 mH  
D = 5.5 mH; E = 2.5 mH; F = 1.2 mH  
G = 0.5 mH

EV/EH 28 types



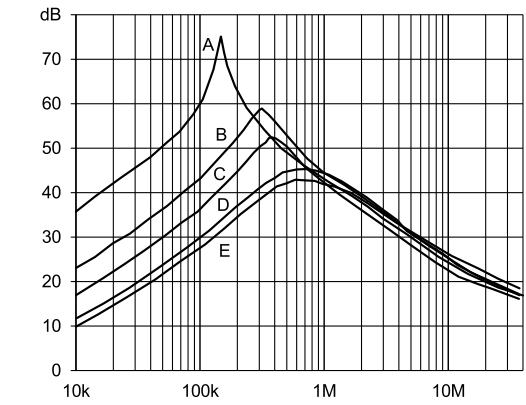
A = 36 mH; B = 20 mH; C = 11 mH  
D = 5 mH; E = 2.3 mH; F = 1.1 mH

EV/EH 28 X types



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

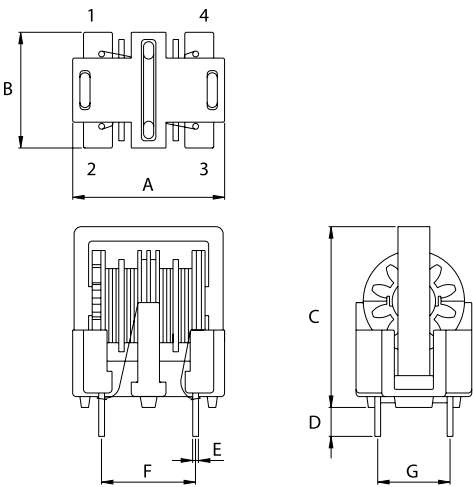
EV/EH 35 types



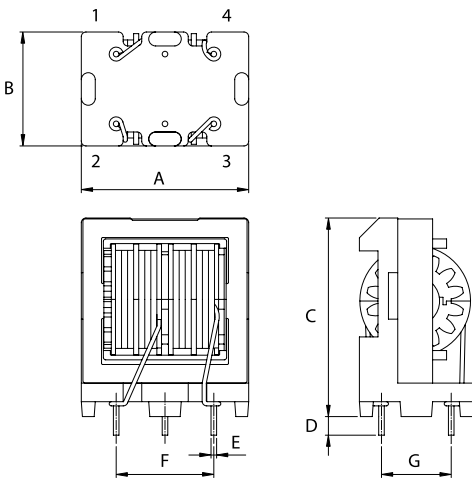
A = 90 mH; B = 20 mH; C = 10 mH  
D = 5 mH; E = 3.6 mH

Mechanical Data

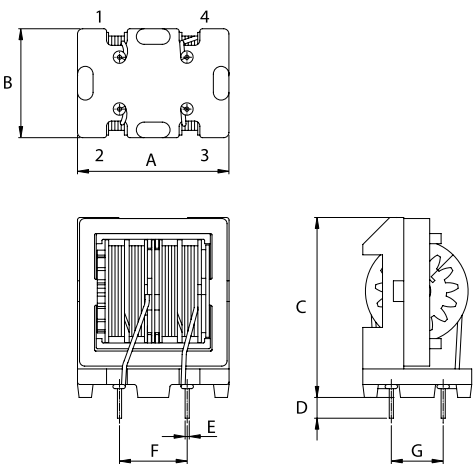
EV 20



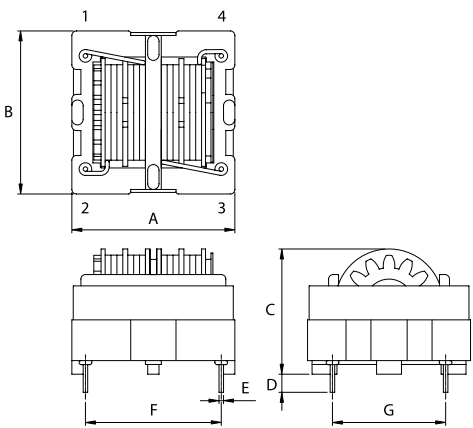
EV 35



EV 24 and 28



EH 20 to 35



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

\* Tolarance is +/-2 mm

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

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