Common-mode Suppression Chokes

Technical specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum continuous operating voltage</td>
<td>250 VAC @ 50°C</td>
</tr>
<tr>
<td>Operating frequency</td>
<td>DC to 400 Hz</td>
</tr>
<tr>
<td>Rated currents</td>
<td>0.3 to 5 A</td>
</tr>
<tr>
<td>Overcurrent</td>
<td>1.5x Innominal for 1 minute, once per hour</td>
</tr>
<tr>
<td>winding-to-winding @ 25°C</td>
<td>3000 VAC, 60 sec, guaranteed</td>
</tr>
<tr>
<td>Temperature range (operation and storage)</td>
<td>-25°C to +100°C (25/100/21)</td>
</tr>
<tr>
<td>Flammability corresponding to UL</td>
<td>94 V-0</td>
</tr>
<tr>
<td>Measuring frequency</td>
<td>10 kHz: 5 mA &lt; 16 μH; 500 μA &gt; 16 μH &lt; 160 μH; 50 μA &gt; 160 μH &gt; 16 mH; 50 mV &gt; 16 mH &lt; 160 mH; Inductance tolerance ±30%</td>
</tr>
<tr>
<td>Resistance</td>
<td>Tolerance max. ±15% @ 25°C ±20 mΩ, 1 A; &gt;20 mΩ ≤200 mΩ, 100 mΩ; &gt;200 mΩ ≤5 V, 10 mA</td>
</tr>
<tr>
<td>Electrical characteristics</td>
<td>@ 25°C ±2°C</td>
</tr>
</tbody>
</table>

Features and benefits

- Rated currents up to 5 A
- Compact and light weight
- Low magnetic leakage flux
- Sectional winding
- Standard foot print
- Wide 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

Electrical characteristics

![Typical electrical schematic](image)
### Choke selection table

<table>
<thead>
<tr>
<th>EH choke</th>
<th>EV choke</th>
<th>L nominal (±30%) [mH]</th>
<th>DC resistance [mΩ]</th>
<th>Rated current I (50°C) [A]</th>
<th>Weight [g]</th>
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</thead>
<tbody>
<tr>
<td>EH 20-0.3-02-33M</td>
<td>EV 20-0.3-02-33M</td>
<td>33</td>
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<td>18</td>
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<td>EH 20-0.8-02-5M6</td>
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<td>5.6</td>
<td>245</td>
<td>0.8</td>
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<td>EH 20-1.0-02-3M9</td>
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<td>EH 24-0.5-02-44M</td>
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</table>

All wires rated 130°C or higher.
Typical choke attenuation
Per CISPR 17; 50Ω/50Ω 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**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>EV 20</th>
<th>EV 24</th>
<th>EV 28</th>
<th>EV 35</th>
<th>EH 20</th>
<th>EH 24</th>
<th>EH 28</th>
<th>EH 35</th>
<th>Tolerances</th>
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<td>17.4</td>
<td>21</td>
<td>25.5</td>
<td>21</td>
<td>24</td>
<td>28</td>
<td>36</td>
<td>±1</td>
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<tr>
<td>C</td>
<td>25*</td>
<td>29.1</td>
<td>34.7</td>
<td>42.7</td>
<td>17.8</td>
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<td>229</td>
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<td>D</td>
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<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
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<td>Ø0.8</td>
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<td>Ø0.8</td>
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<td>13</td>
<td>21</td>
<td>13</td>
<td>21</td>
<td>24</td>
<td>30</td>
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<tr>
<td>G</td>
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<td>15</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>±0.5</td>
</tr>
</tbody>
</table>

All dimensions in mm; 1 inch = 25.4 mm

* Tolerance is +1/-2 mm

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