

# 502 series

## common mode chokes

### PRODUCT DESCRIPTION

West Coast Magnetics' 502 series common mode chokes are designed to attenuate common mode line noise. These common mode chokes can handle currents up to 25 amps and are available in vertical and horizontal mount packages. They provide a typical minimum 15 dB of attenuation from 50 kHz to 30 MHz. They feature interwinding isolation of 1500 Vac and 3mm clearance for safety requirements.

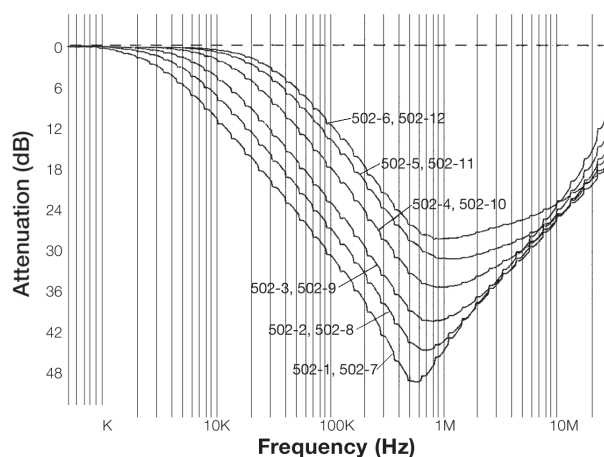
### FEATURES & BENEFITS

Peak current handling capability to 50 amps – Rms current to 25 amps – Excellent noise attenuation – Horizontal and vertical packages

| Product Code | Minimum Inductance mH | Rated DC Current (amps) 40°C Temp Rise | Nominal Leakage Inductance $\mu$ H | Nominal DCR mOhms | Interwinding Isolation VAC | Mount Style |
|--------------|-----------------------|--|------------------------------------|-------------------|----------------------------|-------------|
| 502-1        | 6.4                   | 4.5                                    | 90                                 | 92                | 1500                       | Horizontal  |
| 502-2        | 3.7                   | 6.0                                    | 55                                 | 45                | 1500                       | Horizontal  |
| 502-3        | 2.3                   | 8.5                                    | 36                                 | 22                | 1500                       | Horizontal  |
| 502-4        | 1.3                   | 12.0                                   | 20                                 | 11                | 1500                       | Horizontal  |
| 502-5        | 0.82                  | 17.0                                   | 14                                 | 5.7               | 1500                       | Horizontal  |
| 502-6        | 0.52                  | 25.0                                   | 8                                  | 2.9               | 1500                       | Horizontal  |
| 502-7        | 6.4                   | 4.5                                    | 90                                 | 92                | 1500                       | Vertical    |
| 502-8        | 3.7                   | 6.0                                    | 55                                 | 45                | 1500                       | Vertical    |
| 502-9        | 2.3                   | 8.5                                    | 36                                 | 22                | 1500                       | Vertical    |
| 502-10       | 1.3                   | 12.0                                   | 20                                 | 11                | 1500                       | Vertical    |
| 502-11       | 0.82                  | 17.0                                   | 14                                 | 5.7               | 1500                       | Vertical    |
| 502-12       | 0.52                  | 25.0                                   | 8                                  | 2.9               | 1500                       | Vertical    |



### COMMON MODE NOISE ATTENUATION



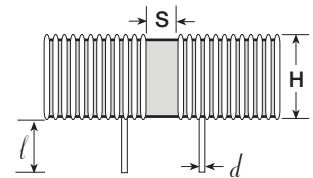
Attenuation measured on HP3577A Network Analyzer in 50 ohm cin



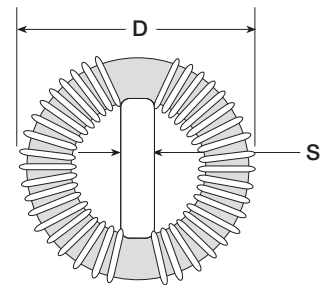
Dimensions: Inches  
cm

| Product Code | H                   | L                   | W                  | D                   | S                 | <i>d</i>           | <i>ℓ</i>          | X                  | Y                 |
|--------------|---------------------|---------------------|--------------------|---------------------|-------------------|--------------------|-------------------|--------------------|-------------------|
| 502-1        | <u>.52</u><br>13.2  | NA                  | NA                 | <u>1.56</u><br>39.6 | <u>.12</u><br>3.0 | <u>.028</u><br>.71 | <u>.25</u><br>6.4 | <u>1.4</u><br>35.6 | <u>.5</u><br>12.7 |
| 502-2        | <u>.52</u><br>13.2  | NA                  | NA                 | <u>1.56</u><br>39.6 | <u>.12</u><br>3.0 | <u>.035</u><br>.89 | <u>.25</u><br>6.4 | <u>1.4</u><br>35.6 | <u>.5</u><br>12.7 |
| 502-3        | <u>.56</u><br>14.2  | NA                  | NA                 | <u>1.60</u><br>40.6 | <u>.12</u><br>3.0 | <u>.044</u><br>1.1 | <u>.25</u><br>6.4 | <u>1.4</u><br>35.6 | <u>.5</u><br>12.7 |
| 502-4        | <u>.60</u><br>15.2  | NA                  | NA                 | <u>1.63</u><br>41.4 | <u>.12</u><br>3.0 | <u>.05</u><br>1.3  | <u>.25</u><br>6.4 | <u>1.4</u><br>35.6 | <u>.5</u><br>12.7 |
| 502-5        | <u>.63</u><br>14.2  | NA                  | NA                 | <u>1.67</u><br>42.4 | <u>.12</u><br>3.0 | <u>.068</u><br>1.7 | <u>.25</u><br>6.4 | <u>1.4</u><br>35.6 | <u>.5</u><br>12.7 |
| 502-6        | <u>.67</u><br>16.0  | NA                  | NA                 | <u>1.70</u><br>43.2 | <u>.12</u><br>3.0 | <u>.085</u><br>2.2 | <u>.25</u><br>6.4 | <u>1.4</u><br>35.6 | <u>.5</u><br>12.7 |
| 502-7        | <u>1.65</u><br>41.9 | <u>1.60</u><br>40.6 | <u>.85</u><br>21.6 | NA                  | <u>.12</u><br>3.0 | <u>.05</u><br>1.3  | <u>.20</u><br>5.1 | <u>.9</u><br>22.9  | <u>.6</u><br>15.2 |
| 502-8        | <u>1.68</u><br>42.7 | <u>1.63</u><br>41.4 | <u>.85</u><br>21.6 | NA                  | <u>.12</u><br>3.0 | <u>.05</u><br>1.3  | <u>.20</u><br>5.1 | <u>.9</u><br>22.9  | <u>.6</u><br>15.2 |
| 502-9        | <u>1.71</u><br>43.4 | <u>1.66</u><br>42.2 | <u>.85</u><br>21.6 | NA                  | <u>.12</u><br>3.0 | <u>.05</u><br>1.3  | <u>.20</u><br>5.1 | <u>.9</u><br>22.9  | <u>.6</u><br>15.2 |
| 502-10       | <u>1.74</u><br>44.2 | <u>1.69</u><br>42.2 | <u>.85</u><br>21.6 | NA                  | <u>.12</u><br>3.0 | <u>.05</u><br>1.3  | <u>.20</u><br>5.1 | <u>.9</u><br>22.9  | <u>.6</u><br>15.2 |
| 502-11       | <u>1.76</u><br>44.7 | <u>1.71</u><br>43.4 | <u>.85</u><br>21.6 | NA                  | <u>.12</u><br>3.0 | <u>.068</u><br>1.7 | <u>.25</u><br>6.4 | <u>.9</u><br>22.9  | <u>.6</u><br>15.2 |
| 502-12       | <u>1.77</u><br>45.0 | <u>1.73</u><br>43.9 | <u>.85</u><br>21.6 | NA                  | <u>.12</u><br>3.0 | <u>.085</u><br>2.2 | <u>.25</u><br>6.4 | <u>.9</u><br>22.9  | <u>.6</u><br>15.2 |

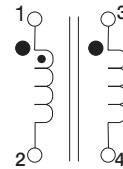
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Side View



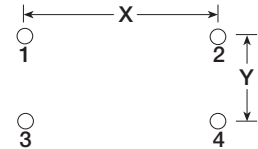
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Top View



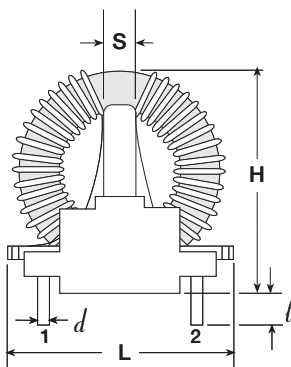
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Schematic



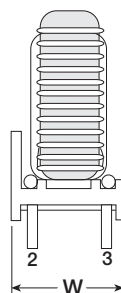
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Footprint



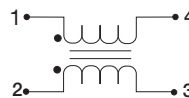
502-7,8,9,10,11,12  
Side View



502-7,8,9,10,11  
Side View



502-7,8,9,10,11,12  
Schematic



502-7,8,9,10,11,12  
Footprint

