

# WCM501 Series Common Mode Chokes

## **Product Description**

West Coast Magnetics' 501 series common mode chokes are designed to attenuate common mode line noise in switching power supplies. These chokes provide a typical minimum 15 dB of attenuation from 100 kHz to 30 MHz. They are offered in two package styles. A low profile surface mount package is compatible with pick and place equipment. A larger through-hole package offers greater attenuation and is also compatible with pick and place equipment.

### **Features and Benefits**

Low profile, surface mount option – Minimum 3mm clearance between windings – High attenuation in a small package – DC currents up to 11 amps – Application specific designs available on request

## **Engineering Data**







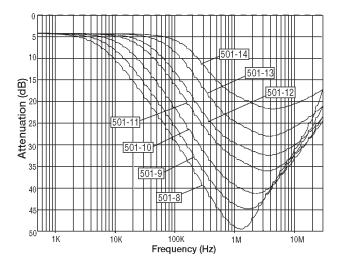


## **Engineering Data Continued**

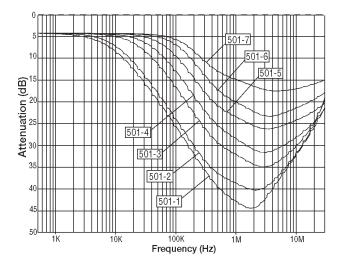
| Product<br>Code | Minimum<br>Inductance<br>(µH) | Rated DC<br>Current<br>(amps) 40°C<br>Temp Rise | Rated DC<br>Current<br>(amps) 25°C<br>Temp Rise | Maximum<br>Leakage<br>Inductance<br>(µH) | Maximum<br>DCR<br>(mOhms) | Interwinding<br>Hypot (Vac) | Mount Style  |
|-----------------|-------------------------------|---|---|--|---------------------------|-----------------------------|--------------|
| WCM501-11       | 599                           | 4.0   | 3.1   | 12.0                                     | 25                        | 1500                        | Through Hole |
| WCM501-12       | 416                           | 5.7   | 4.4   | 7.1                                      | 13                        | 1500                        | Through Hole |
| WCM501-13       | 204                           | 8.1   | 6.3   | 4.1                                      | 6                         | 1500                        | Through Hole |
| WCM501-14       | 104                           | 11.2  | 8.9   | 2.9                                      | 2                         | 1500                        | Through Hole |

## **Graphs WCM501 Series**

#### Common Mode Attenuation - Surface Mount Style



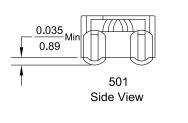
#### Common Mode Attenuation - Through Hole Style

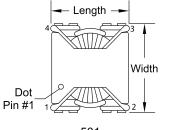


#### Note: Attenuation measured in 50 Ohm circuit on HP3577A Network Analyzer

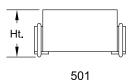


## SURFACE MOUNT OPTION

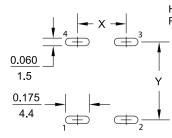




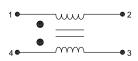
501 Top View



Side View



501 Suggested PCB Layout

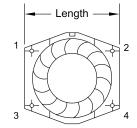


Moulding: Ryton R4 Rating: UL 94-VO SMD Pads: Sn96.5/Cu3.0/Ag0.5

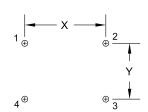
Dimensional Tolerance Length, Width =  $\pm 0.010/0.25$ Height Dimension = Maximum Recommended Tolerance X,Y =  $\pm 0.005/0.13$ 

| Length       | Width        | Height       | х            | Y            |
|--------------|--------------|--------------|--------------|--------------|
| <u>0.650</u> | <u>0.750</u> | <u>0.400</u> | <u>0.445</u> | <u>0.660</u> |
| 16.5         | 19.1         | 10.2         | 11.3         | 16.8         |

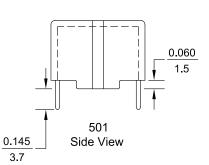
## THROUGH HOLE OPTION



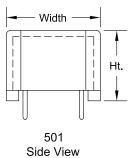
501 Bottom View

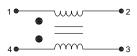


501 Suggested PCB Layout



Note:





Moulding: Ryton R4 Rating: UL 94-VO SMD Pads: Sn96.5/Cu3.0/Ag0.5

Dimensional Tolerance Length, Width =  $\pm 0.010/0.25$ Height Dimension = Maximum Pin Diameter = 0.026" x 0.026" Pin Length =  $0.145/3.7\pm0.020/0.5$ 

| Length      | Width        | Height       | х            | Y            |
|-------------|--------------|--------------|--------------|--------------|
| <u>0880</u> | <u>0.890</u> | <u>0.570</u> | <u>0.787</u> | <u>0.492</u> |
| 22.4        | 22.6         | 14.5         | 20.0         | 12.5         |

#### Dimensions:

Inches mm Please specify vertical or horizontal mount with your order.

\*All materials of construction minimum Class B 130° C rated.

