

# WCM503 Series

## Common Mode Chokes

### Product Description

West Coast Magnetics' 503 series common mode chokes provide excellent noise attenuation in a small surface mount design. Typical common mode noise impedance is 1 kOhm from 300 kHz to 30 MHz. With a continuous RMS current rating of up to 12 amps, this common mode choke can actually handle a peak current of 30 amps for a short duration of time. These chokes are available in tape and reel at larger quantities



### Features and Benefits

DC currents to 12 amps – Compact SMD design – Tape and reel

### Engineering Data

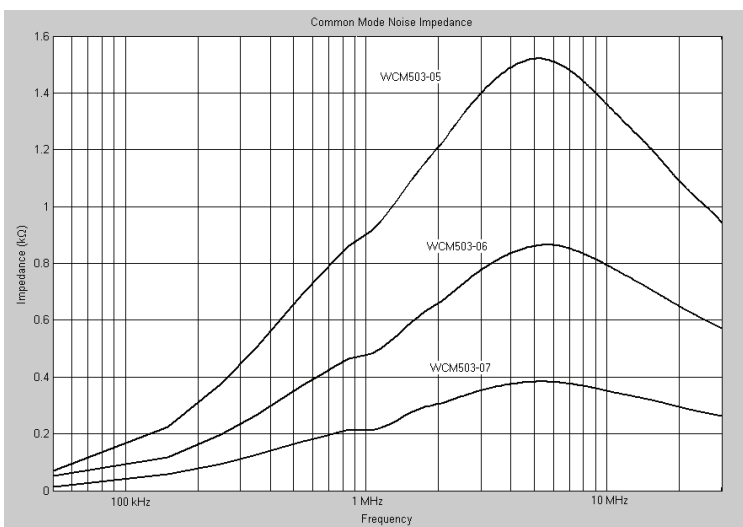
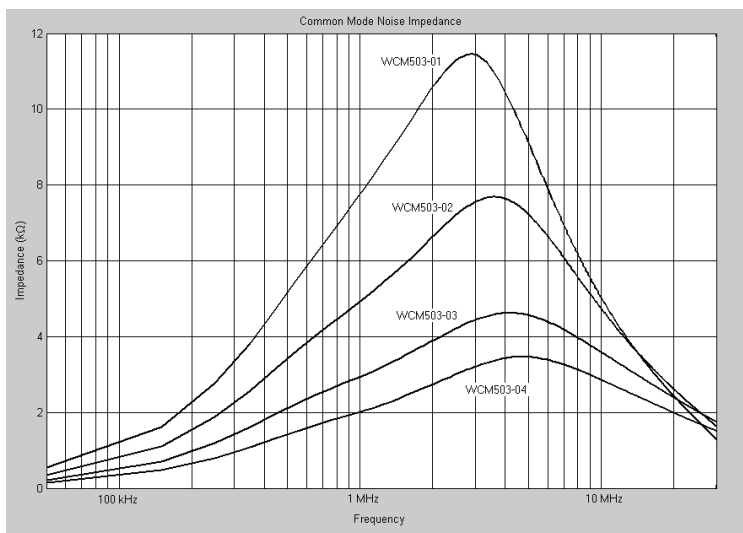
Product Code	Minimum Inductance (µH)	Maximum Leakage (µH)	DCR Nominal (mOhms)	Rated RMS Current (amps)	Interwinding Hypot (Vac)
WCM503-01	1280.0	10.90	197.0	1.4	1500
WCM503-02	857.0	7.70	105.0	1.9	1500
WCM503-03	519.0	5.40	52.0	2.7	1500
WCM503-04	320.0	4.00	26.0	3.8	1500
WCM503-05	169.0	2.20	12.0	5.6	1500
WCM503-06	95.3	1.40	6.0	7.9	1500
WCM503-07	42.3	0.79	2.6	11.9	1500

Note:

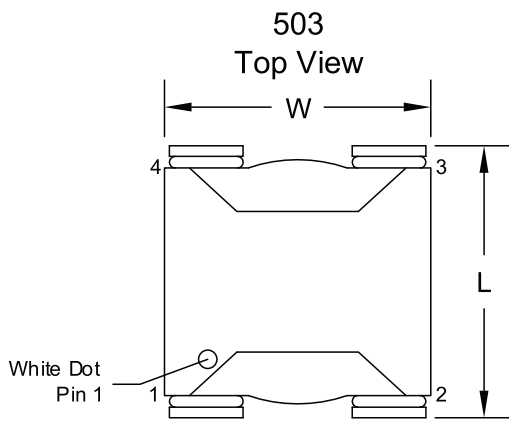
1. The RMS current rating on this datasheet will lead to an approximate 40°C temperature rise above ambient. These chokes will handle up to 2.5 times this current for a short duration.
2. All materials of construction are rated for 155°C continuous service.
3. Operating temperature range is -40°C to +130°C.
4. Weight: 3g.



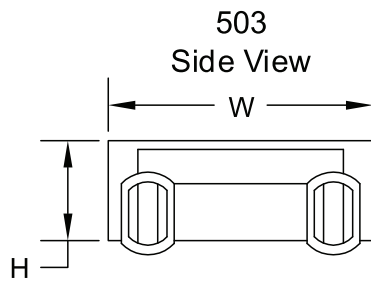
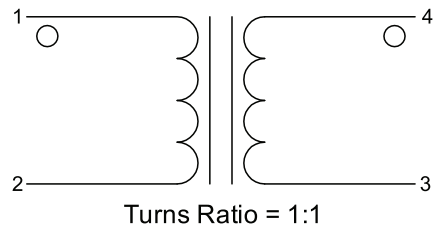
# Graphs WCM503 Series



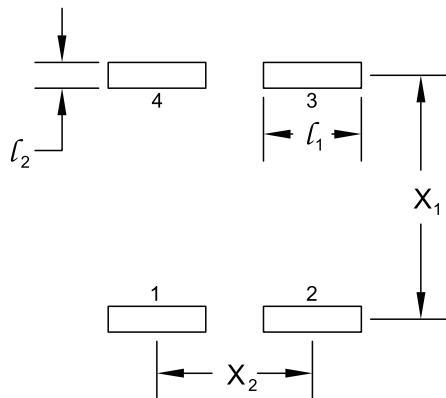
# Schematics WCM503 Series



503  
Schematic



503  
Suggested PCB Layout



Product Code	L	W	H (max)	X <sub>1</sub>	X <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>
WCM503-01	0.63 16.0	0.55 14.0	0.34 8.6	0.53 13.5	0.34 8.6	0.175 4.5	0.06 1.5
WCM502-02	0.63 16.0	0.55 14.0	0.34 8.6	0.53 13.5	0.34 8.6	0.175 4.5	0.06 1.5
WCM503-03	0.63 16.0	0.55 14.0	0.34 8.6	0.53 13.5	0.34 8.6	0.175 4.5	0.06 1.5
WCM503-04	0.63 16.0	0.55 14.0	0.35 8.9	0.53 13.5	0.34 8.6	0.175 4.5	0.06 1.5
WCM503-05	0.63 16.0	0.55 14.0	0.35 8.9	0.53 13.5	0.34 8.6	0.175 4.5	0.06 1.5
WCM503-06	0.63 16.0	0.55 14.0	0.36 9.1	0.53 13.5	0.34 8.6	0.175 4.5	0.06 1.5
WCM503-07	0.63 16.0	0.55 14.0	0.36 9.1	0.53 13.5	0.34 8.6	0.175 4.5	0.06 1.5

**Dimensions:**

Inches  
mm

**Note:**

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