

503 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 & BENEFITS

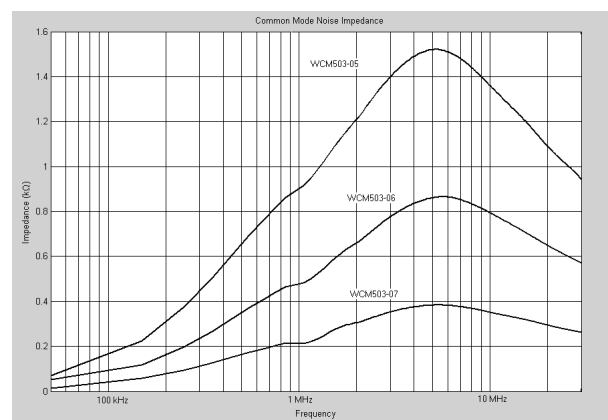
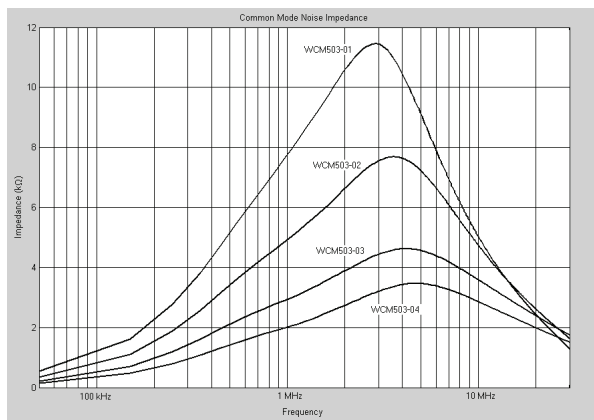
DC currents to 12 amps – Compact SMD design – Tape and reel

Product Code	Minimum Inductance (μ H)	Maximum Leakage (μ H)	DCR Nominal (mOhms)	Rated RMS Current (amps)	Interwinding Hypot (Vac)
503-1	1280.0	10.90	197.0	1.4	1500
503-2	857.0	7.70	105.0	1.9	1500
503-3	519.0	5.40	52.0	2.7	1500
503-4	320.0	4.00	26.0	3.8	1500
503-5	169.0	2.20	12.0	5.6	1500
503-6	95.3	1.40	6.0	7.9	1500
503-7	42.3	0.79	2.6	11.9	1500

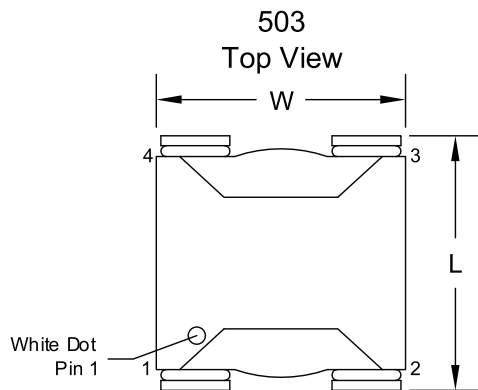


Notes:

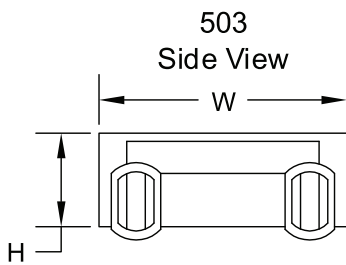
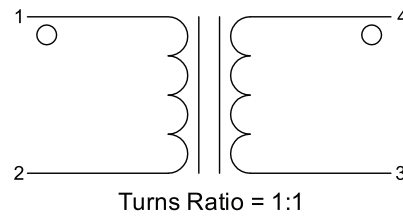
- 1: The RMS current rating on this datasheet will lead to an approximate 40° C temperature rise above ambient. These chokes will handle up to 2.5 times this current for a short duration.
- 2: All materials of construction are rated for 155° C continuous service.



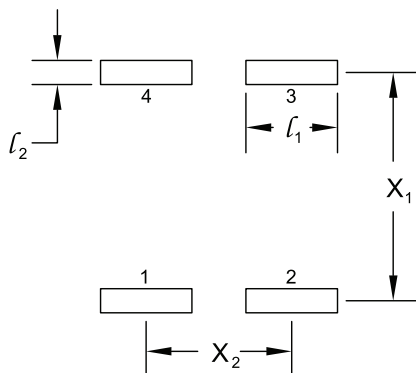
Dimensions: $\frac{\text{inches}}{\text{mm}}$



503 Schematic



503 Suggested PCB Layout



Product Code	L	W	H (max)	X ₁	X ₂	ℓ ₁	ℓ ₂
503-1	<u>0.63</u> 16.0	<u>0.55</u> 14.0	<u>0.34</u> 8.6	<u>0.53</u> 13.5	<u>0.34</u> 8.6	<u>0.175</u> 4.5	<u>0.06</u> 1.5
503-2	<u>0.63</u> 16.0	<u>0.55</u> 14.0	<u>0.34</u> 8.6	<u>0.53</u> 13.5	<u>0.34</u> 8.6	<u>0.175</u> 4.5	<u>0.06</u> 1.5
503-3	<u>0.63</u> 16.0	<u>0.55</u> 14.0	<u>0.34</u> 8.6	<u>0.53</u> 13.5	<u>0.34</u> 8.6	<u>0.175</u> 4.5	<u>0.06</u> 1.5
503-4	<u>0.63</u> 16.0	<u>0.55</u> 14.0	<u>0.35</u> 8.9	<u>0.53</u> 13.5	<u>0.34</u> 8.6	<u>0.175</u> 4.5	<u>0.06</u> 1.5
503-5	<u>0.63</u> 16.0	<u>0.55</u> 14.0	<u>0.35</u> 8.9	<u>0.53</u> 13.5	<u>0.34</u> 8.6	<u>0.175</u> 4.5	<u>0.06</u> 1.5
503-6	<u>0.63</u> 16.0	<u>0.55</u> 14.0	<u>0.36</u> 9.1	<u>0.53</u> 13.5	<u>0.34</u> 8.6	<u>0.175</u> 4.5	<u>0.06</u> 1.5
503-7	<u>0.63</u> 16.0	<u>0.55</u> 14.0	<u>0.36</u> 9.1	<u>0.53</u> 13.5	<u>0.34</u> 8.6	<u>0.175</u> 4.5	<u>0.06</u> 1.5