

WCM504 Series

Common Mode Chokes

Product Description

West Coast Magnetics' 504 series common mode chokes provide excellent noise attenuation in a small package. With a continuous RMS current rating in excess of 20 amps, this common mode choke can actually handle up to 50 amps for a short duration of time. This choke also features high noise attenuation in a compact SMD design and is available in tape and reel at larger quantities. WCM 504-1 through WCM 504-6 provide 3 mm of creepage and clearance for safety agency compliance.



Features and Benefits

DC currents to 23 amps – SMD package – 3 mm creepage & clearance – Tape and reel

Engineering Data

Product Code	Minimum Inductance (µH)	Maximum Leakage (µH)	DCR Nominal (mOhms)	Rated RMS Current (amps)	Interwinding Hypot (Vac)	Clearance (mm)
WCM504-01	1290	29.1	51.0	5.0	1500	3.0
WCM504-02	809	16.1	26.0	7.1	1500	3.0
WCM504-03	439	9.3	16.0	9.0	1500	3.0
WCM504-04	271	5.4	6.3	14.4	1500	3.0
WCM504-05	143	3.2	3.0	20.8	1500	3.0
WCM504-06	110	2.5	2.4	23.3	1500	3.0
WCM504-07	2153	31.3	68.0	4.4	1500	3.0
WCM504-08	1290	20.0	33.0	6.3	1500	3.0

Notes:

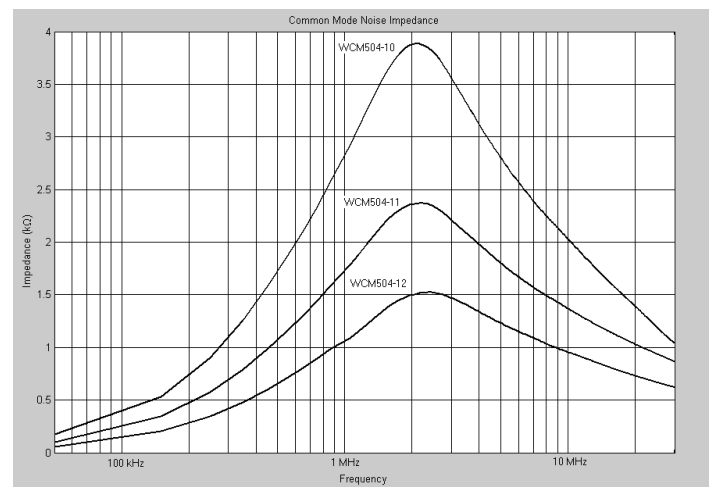
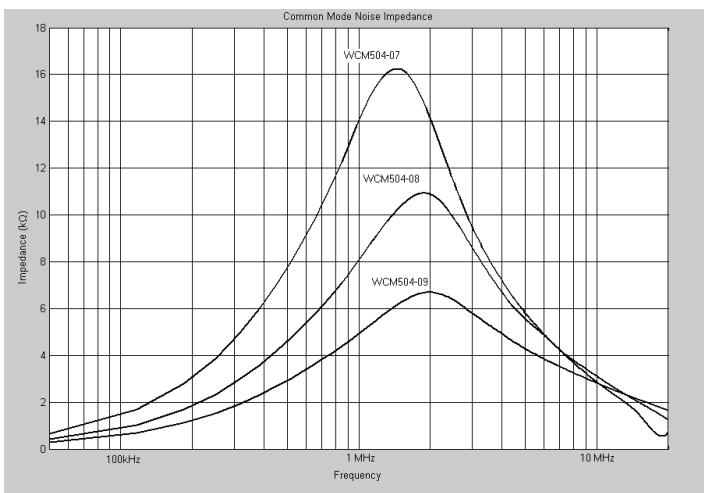
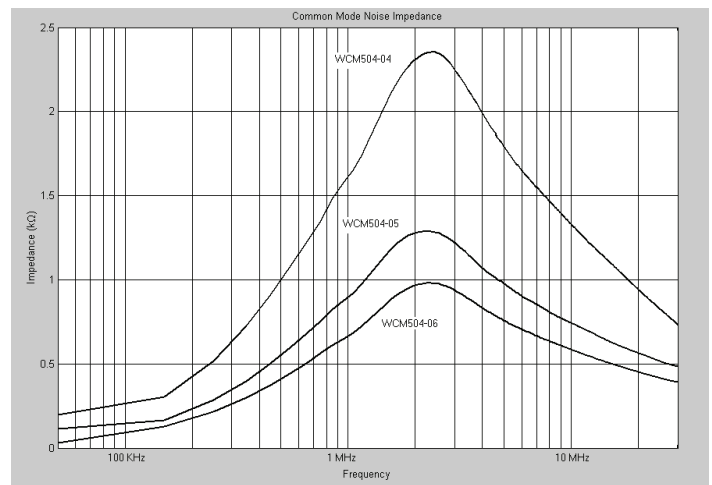
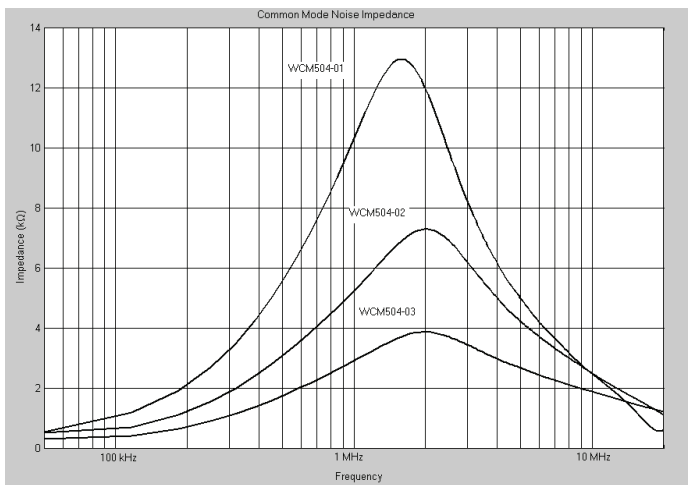
1. The RMS current rating on this datasheet will lead to an approximate 40°C temperature rise above ambient. These chokes will handle up to 2.5 times this current for a short duration.
2. All materials of construction are rated for 155°C continuous service.
3. Operating temperature range is -40°C to +130°C.
4. Weight: 18g.



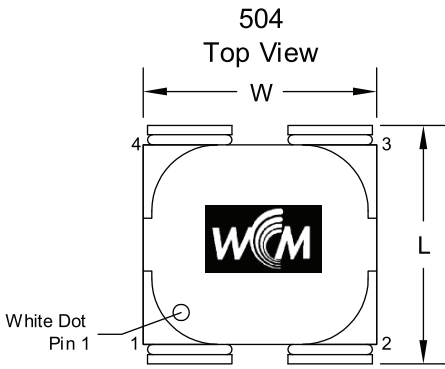
Engineering Data Continued

Product Code	Minimum Inductance (μH)	Maximum Leakage (μH)	DCR Nominal (mOhms)	Rated RMS Current (amps)	Interwinding Hypot (Vac)	Clearance (mm)
WCM504-09	809	11.3	17.0	8.7	1500	3.0
WCM504-10	504	8.0	8.7	12.2	1500	3.0
WCM504-11	323	4.6	4.5	17.0	1500	3.0
WCM504-12	224	4.0	3.1	20.5	1500	3.0

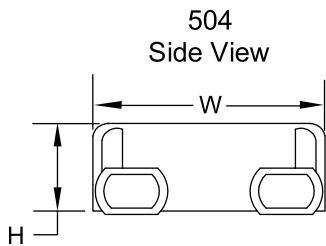
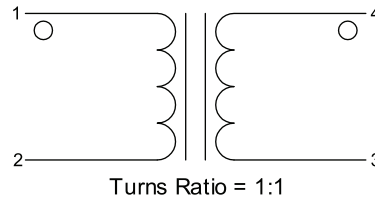
Graphs WCM504 Series



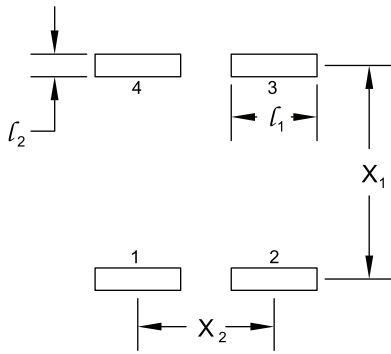
Schematics WCM504 Series



504 Schematic



504 Suggested PCB Layout



Product Code	L	W	H (max)	X ₁	X ₂	l ₁	l ₂	Co-planarity (max)
WCM504-01	1.20 30.50	0.990 25.20	0.48 12.20	1.10 27.90	0.600 15.20	0.400 10.20	0.155 3.94	0.006 0.152
WCM504-02	1.20 30.50	0.990 25.20	0.49 12.40	1.10 27.90	0.600 15.20	0.400 10.20	0.155 3.94	0.006 0.152
WCM504-03	1.20 30.50	0.990 25.20	0.49 12.40	1.10 27.90	0.600 15.20	0.400 10.20	0.155 3.94	0.006 0.152
WCM504-04	1.20 30.50	0.990 25.20	0.50 12.70	1.10 27.90	0.600 15.20	0.400 10.20	0.155 3.94	0.006 0.152
WCM504-05	1.20 30.50	0.990 25.20	0.51 13.00	1.10 27.90	0.600 15.20	0.400 10.20	0.155 3.94	0.006 0.152
WCM504-06	1.20 30.50	0.990 25.20	0.52 13.20	1.10 27.90	0.600 15.20	0.400 10.20	0.155 3.94	0.006 0.152
WCM504-07	1.20 30.50	0.990 25.20	0.48 12.20	1.10 27.90	0.600 15.20	0.400 10.20	0.155 3.94	0.006 0.152
WCM504-08	1.20 30.50	0.990 25.20	0.49 12.40	1.10 27.90	0.600 15.20	0.400 10.20	0.155 3.94	0.006 0.152
WCM504-09	1.20 30.50	0.990 25.20	0.49 12.40	1.10 27.90	0.600 15.20	0.400 10.20	0.155 3.94	0.006 0.152
WCM504-10	1.20 30.50	0.990 25.20	0.50 12.70	1.10 27.90	0.600 15.20	0.400 10.20	0.155 3.94	0.006 0.152
WCM504-11	1.20 30.50	0.990 25.20	0.51 13.00	1.10 27.90	0.600 15.20	0.400 10.20	0.155 3.94	0.006 0.152
WCM504-12	1.20 30.50	0.990 25.20	0.52 13.20	1.10 27.90	0.600 15.20	0.400 10.20	0.155 3.94	0.006 0.152

Dimensions:
Inches
mm

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