



Common Mode Line Chokes - CMD Series

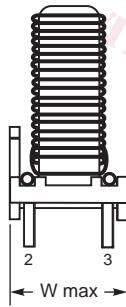
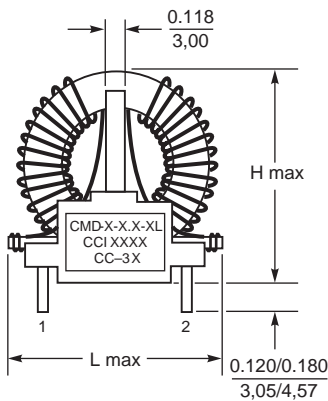
Eastever's CMD toroid style common mode chokes are designed to provide the highest common mode impedance over the widest frequency range. These parts are ideal for any application requiring a high DC current bias and are well suited for use in switch-mode power supplies.

Common mode chokes are most effective in filtering supply and return conductors with in-phase signals of

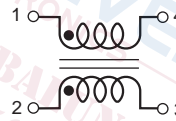
equal amplitude. Differential mode inductors are available for filtering out-of-phase or uneven amplitude signals.

CMTs feature inductance values up to 125 mH and I_{rms} ratings as high as 15 Amps.

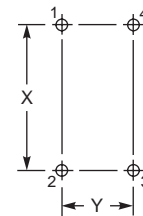
- 1250 V_{rms} isolation between windings
- Industry standard footprint.
- IEC, UL, and VDE compliant.



Schematic



Recommended Board Layout



Weights: CMD1: 13.3 – 25.5 g;
 CMD2: 20.7 – 41.7 g;
 CMD3: 42.5 – 74.9 g;
 CMD4: 115 – 117 g

Terminations: Tin-silver over copper

CMD-1 Series

Part number	L min ¹ (mH)	I _{rms} (A)	Leakage inductance ² max (μH)	DCR max (Ohms)	H max	L max	W max	X ±0.01/0,25	Y ±0.01/0,25	Lead diameter nom	PC board hole diameter
CMD1-5.0-1L	5.0	1.0	80	0.207	1.100/27,9	1.210/30,7	0.625/15,9	0.80/20,3	0.40/10,2	0.054/1,37	0.091/2,32
CMD1-8.0-1L	8.0	1.0	125	0.270	1.100/27,9	1.210/30,7	0.625/15,9	0.80/20,3	0.40/10,2	0.054/1,37	0.091/2,32
CMD1-15.0-1L	15.0	1.0	233	0.430	1.155/29,4	1.300/33,0	0.625/15,9	0.80/20,3	0.40/10,2	0.054/1,37	0.091/2,32
CMD1-2.5-2L	2.5	2.0	42	0.090	1.100/27,9	1.210/30,7	0.625/15,9	0.80/20,3	0.40/10,2	0.054/1,37	0.091/2,32
CMD1-4.0-2L	4.0	2.0	70	0.095	1.050/26,7	1.210/30,7	0.625/15,9	0.80/20,3	0.40/10,2	0.054/1,37	0.091/2,32
CMD1-7.5-2L	7.5	2.0	74	0.108	1.155/29,4	1.300/33,0	0.625/15,9	0.80/20,3	0.40/10,2	0.054/1,37	0.091/2,32
CMD1-1.3-4L	1.3	4.0	20	0.029	1.100/27,9	1.210/30,7	0.625/15,9	0.80/20,3	0.40/10,2	0.054/1,37	0.091/2,32
CMD1-2.1-4L	2.1	4.0	36	0.040	1.100/27,9	1.210/30,7	0.625/15,9	0.80/20,3	0.40/10,2	0.054/1,37	0.091/2,32
CMD1-3.7-4L	3.7	4.0	40	0.036	1.125/28,6	1.300/33,0	0.625/15,9	0.80/20,3	0.40/10,2	0.054/1,37	0.091/2,32
CMD1-1.0-6L	1.0	6.0	19	0.022	1.100/27,9	1.210/30,7	0.625/15,9	0.80/20,3	0.40/10,2	0.054/1,37	0.091/2,32
CMD1-1.7-6L	1.7	6.0	34	0.032	1.155/29,4	1.300/33,0	0.625/15,9	0.80/20,3	0.40/10,2	0.054/1,37	0.091/2,32
CMD1-3.0-6L	3.0	6.0	35	0.027	1.200/30,5	1.210/30,7	0.625/15,9	0.80/20,3	0.40/10,2	0.054/1,37	0.091/2,32
CMD1-6-9L	0.6	9.0	11	0.012	1.200/30,5	1.210/30,7	0.625/15,9	0.80/20,3	0.40/10,2	0.042/1,07	0.071/1,80
CMD1-1.1-9L	1.1	9.0	12	0.013	1.300/33,0	1.210/30,7	0.625/15,9	0.80/20,3	0.40/10,2	0.042/1,07	0.071/1,80
CMD1-1.9-9L	1.9	9.0	20	0.017	1.300/33,0	1.400/35,6	0.625/15,9	0.80/20,3	0.40/10,2	0.042/1,07	0.071/1,80
CMD1-5-12L	0.5	12.0	9	0.008	1.200/30,5	1.210/30,7	0.650/16,5	0.80/20,3	0.40/10,2	0.048/1,22	0.081/2,06
CMD1-8-12L	0.8	12.0	9	0.008	1.200/30,5	1.210/30,7	0.650/16,5	0.80/20,3	0.40/10,2	0.048/1,22	0.081/2,06
CMD1-1.4-12L	1.4	12.0	16	0.011	1.300/33,0	1.210/30,7	0.650/16,5	0.80/20,3	0.40/10,2	0.048/1,22	0.081/2,06
CMD1-3-15L	0.3	15.0	6	0.005	1.300/33,0	1.210/30,7	0.625/15,9	0.80/20,3	0.40/10,2	0.054/1,37	0.091/2,32
CMD1-6-15L	0.6	15.0	6.5	0.006	1.250/31,8	1.210/30,7	0.650/16,5	0.80/20,3	0.40/10,2	0.054/1,37	0.091/2,32
CMD1-1.1-15L	1.1	15.0	13.7	0.008	1.250/31,8	1.210/30,7	0.700/17,8	0.80/20,3	0.40/10,2	0.054/1,37	0.091/2,32

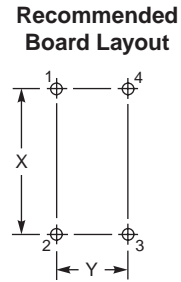
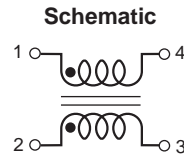
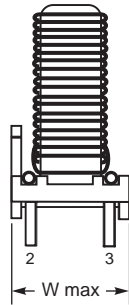
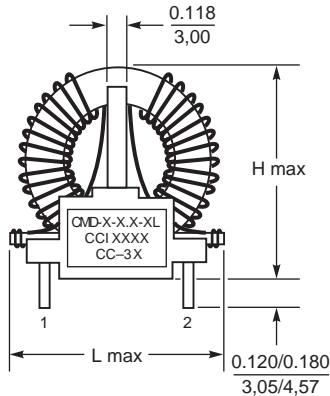
1. Inductance is per winding, tested at 15.75 kHz, 0 Adc.
2. Leakage inductance is measured from pin 1 to pin 4 with pins 2 and 3 shorted.
3. Operating temperature range –40°C to +85°C.
4. Electrical specifications at 25°C.



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Common Mode Line Chokes – CMD Series



Weights: CMD1: 13.3 – 25.5 g;
CMD2: 20.7 – 41.7 g;
CMD3: 42.5 – 74.9 g;
CMD4: 115 – 117 g

Terminations: Tin-silver over copper

CMD-2 Series

Part number	L min ¹ (mH)	I _{rms} (A)	Leakage inductance ² max (μH)	DCR max (Ohms)	H max	L max	W max	X ±0.01/0,25	Y ±0.01/0,25	Lead diameter nom	PC board hole diameter
CMD2-7.5-1L	7.5	1.0	90	0.270	1.100/27,9	1.310/33,3	0.825/21,0	0.90/22,9	0.60/15,2	0.054/1,37	0.091/2,32
CMD2-13-1L	13.0	1.0	190	0.415	1.300/33,0	1.310/33,3	0.825/21,0	0.90/22,9	0.60/15,2	0.054/1,37	0.091/2,32
CMD2-3.8-2L	3.8	2.0	48	0.106	1.100/27,9	1.310/33,3	0.825/21,0	0.90/22,9	0.60/15,2	0.054/1,37	0.091/2,32
CMD2-6.5-2L	6.5	2.0	98	0.145	1.300/33,0	1.310/33,3	0.825/21,0	0.90/22,9	0.60/15,2	0.054/1,37	0.091/2,32
CMD2-1.9-4L	1.9	4.0	26	0.038	1.100/27,9	1.310/33,3	0.825/21,0	0.90/22,9	0.60/15,2	0.054/1,37	0.091/2,32
CMD2-3.3-4L	3.3	4.0	45	0.055	1.300/33,0	1.310/33,3	0.825/21,0	0.90/22,9	0.60/15,2	0.054/1,37	0.091/2,32
CMD2-1.5-6L	1.5	6.0	21	0.029	1.100/27,9	1.310/33,3	0.825/21,0	0.90/22,9	0.60/15,2	0.054/1,37	0.091/2,32
CMD2-2.6-6L	2.6	6.0	41	0.040	1.400/35,6	1.400/35,6	0.900/22,9	0.90/22,9	0.60/15,2	0.054/1,37	0.091/2,32
CMD2-9-9L	0.9	9.0	17	0.014	1.200/30,5	1.310/33,3	0.825/21,0	0.90/22,9	0.60/15,2	0.042/1,07	0.071/1,80
CMD2-1.5-9L	1.5	9.0	15	0.013	1.250/31,8	1.250/31,8	0.825/21,0	0.90/22,9	0.60/15,2	0.042/1,07	0.071/1,80
CMD2-7-12L	0.7	12.0	14	0.011	1.200/30,5	1.250/31,8	0.825/21,0	0.90/22,9	0.60/15,2	0.048/1,22	0.081/2,06
CMD2-1.2-12L	1.2	12.0	14	0.011	1.200/30,5	1.250/31,8	0.825/21,0	0.90/22,9	0.60/15,2	0.048/1,22	0.081/2,06
CMD2-5-15L	0.5	15.0	8.7	0.007	1.300/33,0	1.300/33,0	0.825/21,0	0.90/22,9	0.60/15,2	0.054/1,37	0.091/2,32
CMD2-8-15L	0.8	15.0	10	0.007	1.200/30,5	1.250/31,8	0.825/21,0	0.90/22,9	0.60/15,2	0.054/1,37	0.091/2,32

1. Inductance is per winding, tested at 15.75 kHz, 0 Adc.
2. Leakage inductance is measured from pin 1 to pin 4 with pins 2 and 3 shorted.
3. Operating temperature range -40°C to +85°C.
4. Electrical specifications at 25°C.

CMD-3 Series

Part number	L min ¹ (mH)	I _{rms} (A)	Leakage inductance ² max (μH)	DCR max (Ohms)	H max	L max	W max	X ±0.01/0,25	Y ±0.01/0,25	Lead diameter nom	PC board hole diameter
CMD3-32-1L	32.0	1.0	485	0.650	1.400/35,6	1.650/41,9	0.925/23,5	1.20/30,5	0.70/17,8	0.054/1,37	0.091/2,32
CMD3-56-1L	56.0	1.0	780	0.900	1.650/41,9	1.650/41,9	0.925/23,5	1.20/30,5	0.70/17,8	0.054/1,37	0.091/2,32
CMD3-16-2L	16.0	2.0	210	0.240	1.400/35,6	1.650/41,9	0.925/23,5	1.20/30,5	0.70/17,8	0.054/1,37	0.091/2,32
CMD3-28-2L	28.0	2.0	410	0.330	1.650/41,9	1.650/41,9	0.925/23,5	1.20/30,5	0.70/17,8	0.054/1,37	0.091/2,32
CMD3-8-4L	8.0	4.0	57.5	0.061	1.350/34,3	1.650/41,9	0.925/23,5	1.20/30,5	0.70/17,8	0.054/1,37	0.091/2,32
CMD3-14-4L	14.0	4.0	180	0.120	1.700/43,2	1.650/41,9	0.950/24,1	1.20/30,5	0.70/17,8	0.054/1,37	0.091/2,32
CMD3-6.6-6L	6.6	6.0	49	0.048	1.400/35,6	1.600/40,6	0.925/23,5	1.20/30,5	0.70/17,8	0.054/1,37	0.091/2,32
CMD3-11.5-6L	11.5	6.0	140	0.088	1.700/43,2	1.650/41,9	0.925/23,5	1.20/30,5	0.70/17,8	0.054/1,37	0.091/2,32
CMD3-4-9L	4.0	9.0	37	0.026	1.400/35,6	1.450/36,8	0.925/23,5	1.20/30,5	0.70/17,8	0.042/1,07	0.071/1,80
CMD3-7-9L	7.0	9.0	104	0.045	1.760/44,7	1.760/44,7	0.975/24,8	1.20/30,5	0.70/17,8	0.042/1,07	0.071/1,80
CMD3-3-12L	3.0	12.0	40	0.022	1.700/43,2	1.700/43,2	0.950/24,1	1.20/30,5	0.70/17,8	0.048/1,22	0.081/2,06
CMD3-5.2-12L	5.2	12.0	47	0.025	1.700/43,2	1.700/43,2	1.000/25,4	1.20/30,5	0.70/17,8	0.048/1,22	0.081/2,06
CMD3-2.5-15L	2.5	15.0	42	0.019	1.750/44,5	1.750/44,5	1.000/25,4	1.20/30,5	0.70/17,8	0.054/1,37	0.091/2,32
CMD3-4.4-15L	4.4	15.0	48	0.017	1.700/43,2	1.700/43,2	1.000/25,4	1.20/30,5	0.70/17,8	0.054/1,37	0.091/2,32

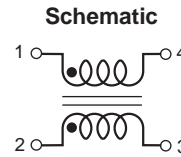
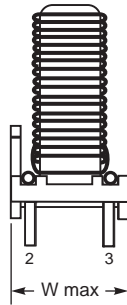
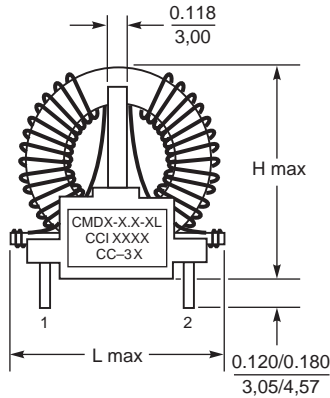
1. Inductance is per winding, tested at 15.75 kHz, 0 Adc.
2. Leakage inductance is measured from pin 1 to pin 4 with pins 2 and 3 shorted.
3. Operating temperature range -40°C to +85°C.
4. Electrical specifications at 25°C.



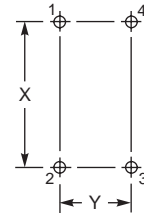
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Recommended Board Layout



Weights: CMD1: 13.3 – 25.5 g;
CMD2: 20.7 – 41.7 g;
CMD3: 42.5 – 74.9 g;
CMD4: 115 – 117 g

Terminations: Tin-silver over copper

CMD-4 Series

Part number	L min ¹ (mH)	I _{rms} (A)	Leakage inductance ² max (μH)	DCR max (Ohms)	H max	L max	W max	X ±0.01/0,25	Y ±0.01/0,25	Lead diameter nom	PC board hole diameter
CMD4-72-1L	72.0	1.0	1400	1.150	2.100/53,3	2.100/53,3	1.130/28,7	1.50/38,1	0.90/22,9	0.054/1,37	0.091/2,32
CMD4-125-1L	125.0	1.0	1400	1.150	2.200/55,9	2.150/54,6	1.130/28,7	1.50/38,1	0.90/22,9	0.054/1,37	0.091/2,32
CMD4-36-2L	36.0	2.0	680	0.415	2.215/56,3	2.150/54,6	1.130/28,7	1.50/38,1	0.90/22,9	0.054/1,37	0.091/2,32
CMD4-62-2L	62.0	2.0	750	0.415	2.200/55,9	2.150/54,6	1.130/28,7	1.50/38,1	0.90/22,9	0.054/1,37	0.091/2,32
CMD4-19-4L	19.0	4.0	350	0.150	2.200/55,9	2.180/55,4	1.130/28,7	1.50/38,1	0.90/22,9	0.054/1,37	0.091/2,32
CMD4-32-4L	32.0	4.0	370	0.158	2.200/55,9	2.180/55,4	1.130/28,7	1.50/38,1	0.90/22,9	0.054/1,37	0.091/2,32
CMD4-15-6L	15.0	6.0	275	0.114	2.200/55,9	2.180/55,4	1.130/28,7	1.50/38,1	0.90/22,9	0.054/1,37	0.091/2,32
CMD4-26-6L	26.0	6.0	320	0.115	2.225/56,5	2.180/55,4	1.130/28,7	1.50/38,1	0.90/22,9	0.054/1,37	0.091/2,32
CMD4-10-9L	10.0	9.0	190	0.057	2.200/55,9	2.180/55,4	1.130/28,7	1.50/38,1	0.90/22,9	0.042/1,07	0.071/1,80
CMD4-17-9L	17.0	9.0	220	0.062	2.280/47,9	2.250/57,2	1.150/29,2	1.50/38,1	0.90/22,9	0.042/1,07	0.071/1,80
CMD4-7.5-12L	7.5	12.0	140	0.042	2.200/55,9	2.250/57,2	1.130/28,7	1.50/38,1	0.90/22,9	0.048/1,22	0.081/2,06
CMD4-13-12L	13.0	12.0	155	0.043	2.250/57,2	2.300/58,4	1.130/28,7	1.50/38,1	0.90/22,9	0.048/1,22	0.081/2,06
CMD4-6-15L	6.0	15.0	111	0.030	2.250/57,2	2.250/57,2	1.150/29,2	1.50/38,1	0.90/22,9	0.054/1,37	0.091/2,32
CMD4-10-15L	10.0	15.0	122	0.029	2.280/57,9	2.300/58,4	1.130/28,7	1.50/38,1	0.90/22,9	0.054/1,37	0.091/2,32

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