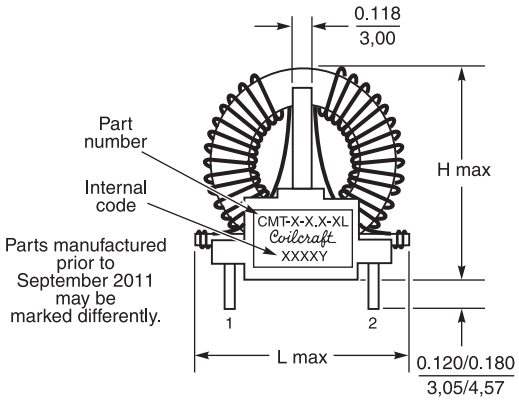
Common Mode Line Chokes - CMT

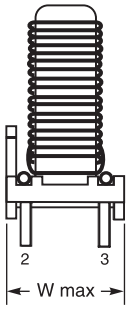
Coilcraft's CMT toroid style common mode chokes are designed to provide the highest common mode impedance over the widest frequency range. These parts are ideal for any application requiring a high DC current bias and are well suited for use in switch-mode power supplies.

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.

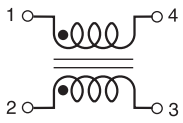
CMTs feature inductance values up to 125 mH and Irms ratings as high as 15 Amps.

- 1250 Vrms isolation between windings
- Industry standard footprint.
- Creepage and clearance = 3.2 mm

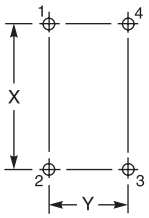




Schematic



Recommended Board Layout



Weights: CMT1: 13.3 – 25.5 g; CMT2: 20.7– 41.7 g; CMT3: 42.5 – 77.2 g; CMT4: 115 – 117 g

Terminations: Tin-silver over copper

CMT-1 Series

Part number	L min[1] (mH)	Irms (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
CMT1-5.0-1L	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
CMT1-8.0-1L	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
CMT1-15.0-1L	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
CMT1-2.5-2L	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
CMT1-4.0-2L	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
CMT1-7.5-2L	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
CMT1-1.3-4L	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
CMT1-2.1-4L	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
CMT1-3.7-4L	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
CMT1-1.0-6L	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
CMT1-1.7-6L	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
CMT1-3.0-6L	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
CMT1-.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
CMT1-1.1-9L	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
CMT1-1.9-9L	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
CMT1-.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
CMT1-.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
CMT1-1.4-12L	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
CMT1-.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
CMT1-.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
CMT1-1.1-15L	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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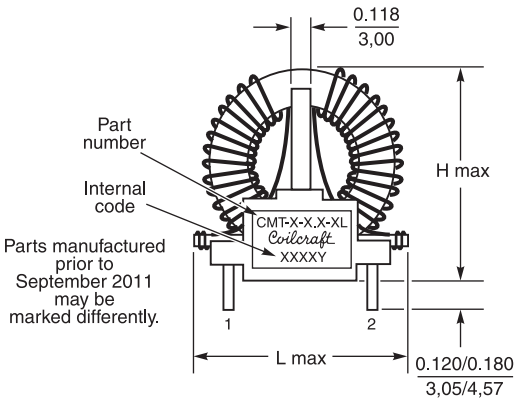
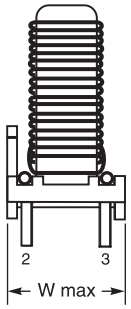
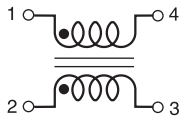
Document 326-1 Revised 12/15/11

Common Mode Line Chokes – CMT Series

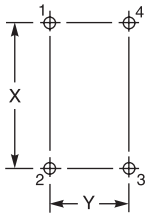




Schematic



Recommended Board Layout



Weights: CMT1: 13.3 – 25.5 g;
CMT2: 20.7– 41.7 g;
CMT3: 42.5 – 74.9 g;
CMT4: 115 – 117 g

Terminations: Tin-silver over copper

CMT-2 Series

Part number	L min[1] (mH)	Irms (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
CMT2-7.5-1L	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
CMT2-13-1L	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
CMT2-3.8-2L	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
CMT2-6.5-2L	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
CMT2-1.9-4L	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
CMT2-3.3-4L	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
CMT2-1.5-6L	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
CMT2-2.6-6L	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
CMT2-.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
CMT2-1.5-9L	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
CMT2-.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
CMT2-1.2-12L	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
CMT2-.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
CMT2-.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..

CMT-3 Series

Part number	L min[1] (mH)	Irms (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
CMT3-32-1L	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
CMT3-56-1L	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
CMT3-16-2L	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
CMT3-28-2L	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
CMT3-8-4L	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
CMT3-14-4L	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
CMT3-6.6-6L	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
CMT3-11.5-6L	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
CMT3-4-9L	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
CMT3-7-9L	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
CMT3-3-12L	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
CMT3-5.2-12L	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
CMT3-2.5-15L	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
CMT3-4.4-15L	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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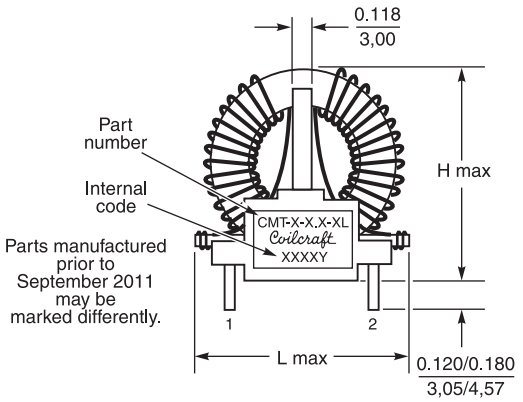
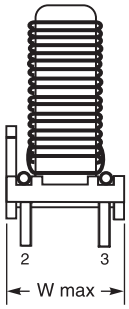
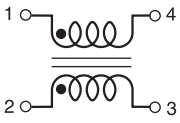
Document 326-2 Revised 12/15/11

Common Mode Line Chokes – CMT Series

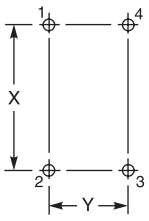




Schematic



Recommended Board Layout



Weights: CMT1: 13.3 – 25.5 g; CMT2: 20.7– 41.7 g; CMT3: 42.5 – 74.9 g; CMT4: 115 – 117 g

Terminations: Tin-silver over copper

CMT-4 Series

Part number	L min[1] (mH)	Irms (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
CMT4-72-1L	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
CMT4-125-1L	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
CMT4-36-2L	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
CMT4-62-2L	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
CMT4-19-4L	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
CMT4-32-4L	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
CMT4-15-6L	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
CMT4-26-6L	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
CMT4-10-9L	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
CMT4-17-9L	17.0	9.0	220	0.062	2.280/57,9	2.250/57,2	1.150/29,2	1.50/38,1	0.90/22,9	0.042/1,07	0.071/1,80
CMT4-7.5-12L	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
CMT4-13-12L	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
CMT4-6-15L	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
CMT4-10-15L	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

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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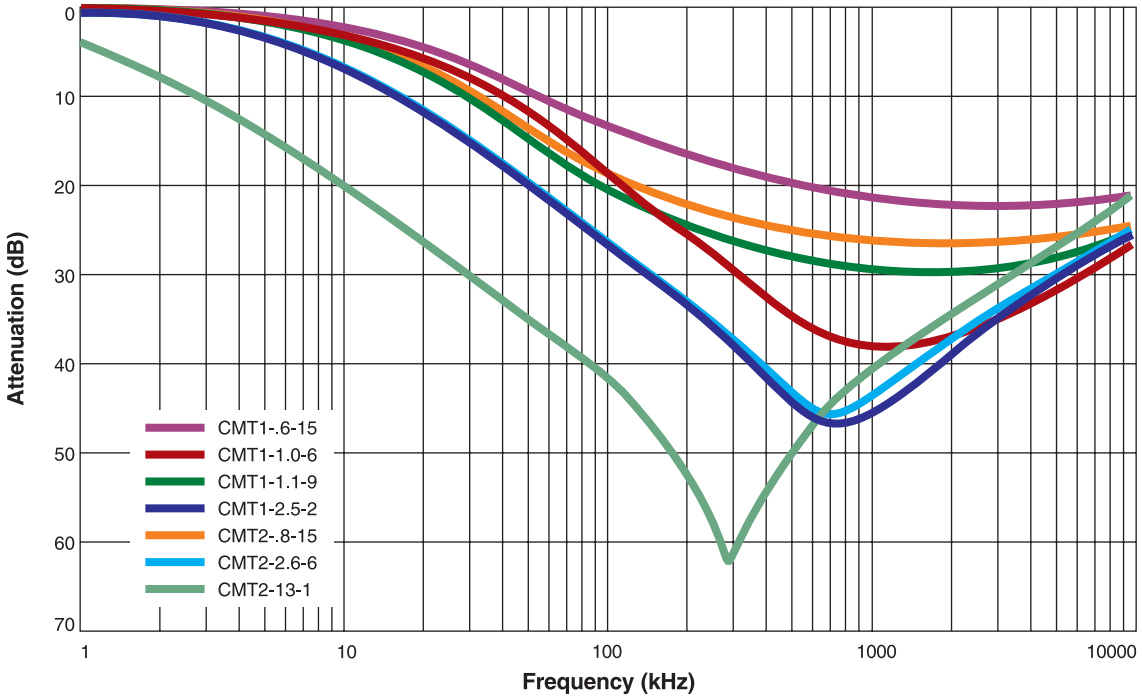
Document 326-3 Revised 12/15/11

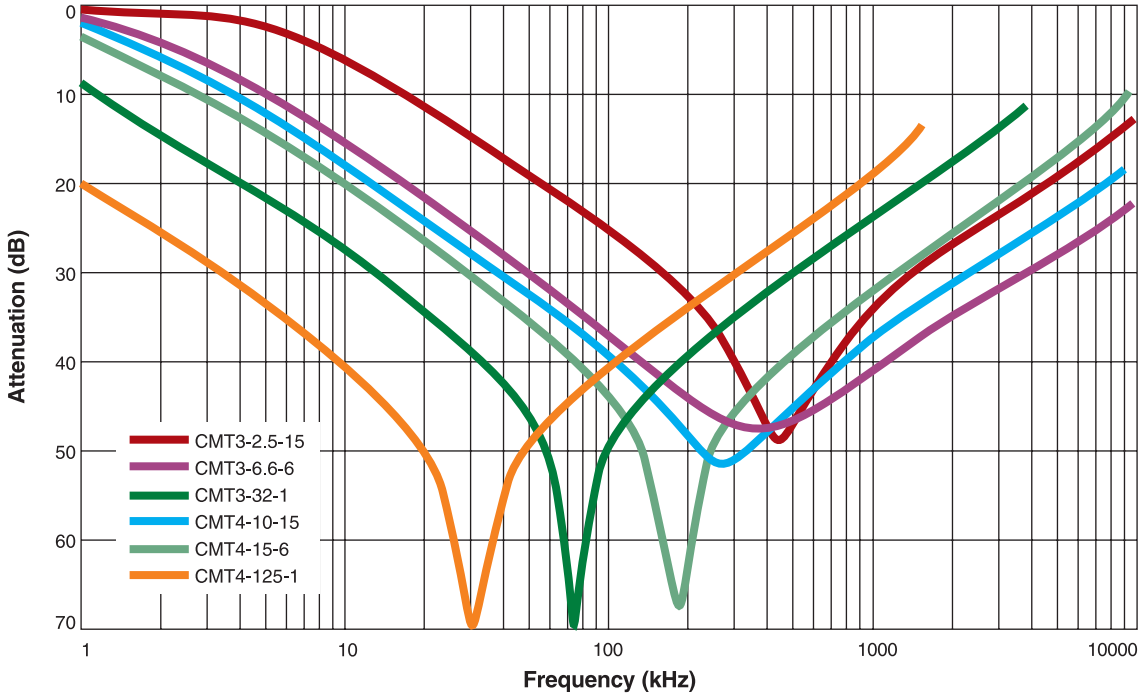
Common Mode Line Chokes – CMT Series

Typical Common Mode Attenuation (Ref: 50 Ohms)

CMT1 and CMT2



CMT3 and CMT4



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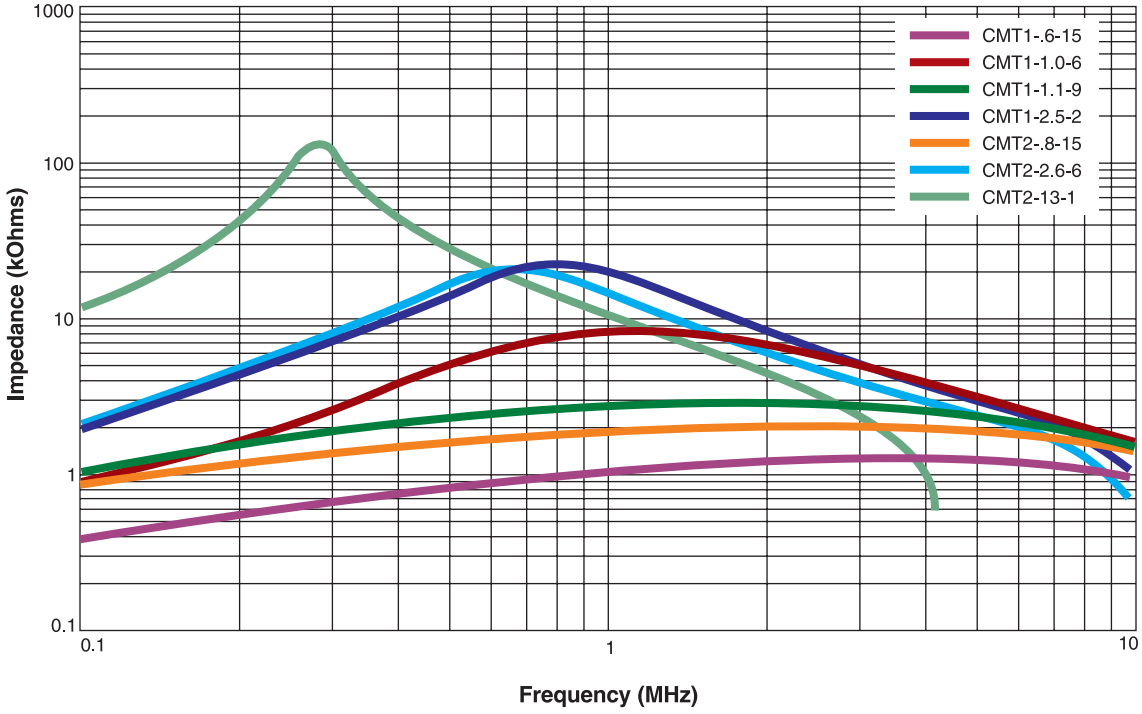
Document 326-4 Revised 12/15/11

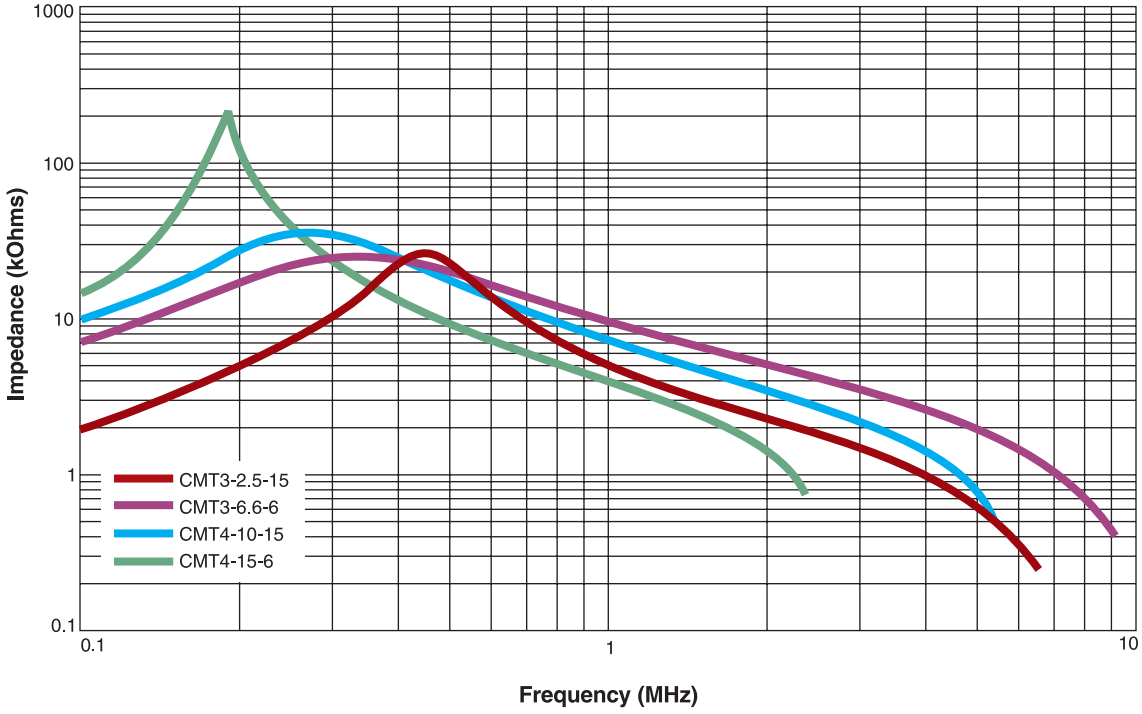
Common Mode Line Chokes – CMT Series

Typical Impedance

CMT1 and CMT2



CMT3 and CMT4



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