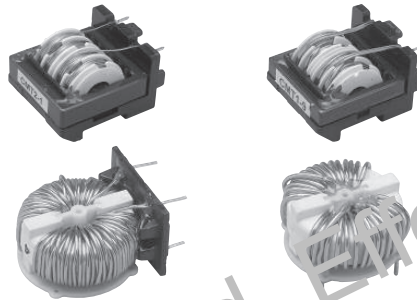


CMT

Common mode inductors, through-hole



Product description

- Four sizes of through-hole off-line common mode inductors
- Inductance range from 0.53 - 66 mH
- Current range up to 6.5 Amps
- Noise attenuation up to 68 dB
- Frequency range up to 6 MHz
- Meets UL94V-0 flammability standard
- Ferrite core material

Applications

- Protects AC input from effects of switching regulators
- Off-line power supplies
- EMI filters
- DC/DC converters
- Computer, TV, audio and office equipment

Environmental data

- Storage temperature range (component): -40°C to +125°C
- Operating temperature range: -40°C to +125°C (ambient + self-temperature rise).



Product specifications

Part number	OCL (mH) minimum (1-2)	OCL (mH) minimum (4-3)	I rms. Amperes max	DCR (Ω) typ @ 20°C (1-2)	DCR (Ω) typ @ 20°C (4-3)
CMT1-1-R	66.0	66.0	0.74	1.20	1.20
CMT1-2-R	49.0	49.0	0.88	0.85	0.85
CMT1-3-R	28.0	28.0	1.13	0.50	0.50
CMT1-4-R	21	21	1.37	0.35	0.35
CMT1-5-R	13	13	1.76	0.20	0.20
CMT1-6-R	7.50	7.50	2.27	0.13	0.13
CMT1-7-R	4.20	4.20	2.89	0.08	0.08
CMT1-8-R	2.40	2.40	3.85	0.045	0.045
CMT1-9-R	1.85	1.85	4.53	0.033	0.033
CMT1-10-R	0.94	0.94	6.05	0.018	0.018
CMT2-1-R	30	30	1.50	0.350	0.350
CMT2-2-R	20	20	1.95	0.220	0.220
CMT2-3-R	12	12	2.45	0.135	0.135
CMT2-4-R	8.0	8.0	2.8	0.100	0.100
CMT2-5-R	6.0	6.0	3.40	0.070	0.070
CMT2-6-R	4.8	4.8	3.95	0.053	0.053
CMT2-7-R	3.2	3.2	4.40	0.042	0.042
CMT2-8-R	2.4	2.4	4.75	0.037	0.037
CMT2-9-R	2.0	2.0	5.4	0.028	0.028
CMT2-10-R	1.6	1.6	5.75	0.026	0.026
CMT3-1-R	5.4	5.4	2.0	0.12	0.12
CMT3-2-R	3.5	3.5	2.6	0.08	0.08
CMT3-3-R	2.7	2.7	3.0	0.055	0.055
CMT3-4-R	1.3	1.3	4.0	0.032	0.032
CMT3-5-R	0.92	0.92	5.0	0.021	0.021
CMT3-6-R	0.53	0.53	6.5	0.013	0.013
CMT4-1-R	5.4	5.4	2.0	0.12	0.12
CMT4-2-R	3.5	3.5	2.6	0.08	0.08
CMT4-3-R	2.7	2.7	3.0	0.055	0.055
CMT4-4-R	1.3	1.3	4.0	0.032	0.032
CMT4-5-R	0.92	0.92	5.0	0.021	0.021
CMT4-6-R	0.53	0.53	6.5	0.013	0.013

Definitions:

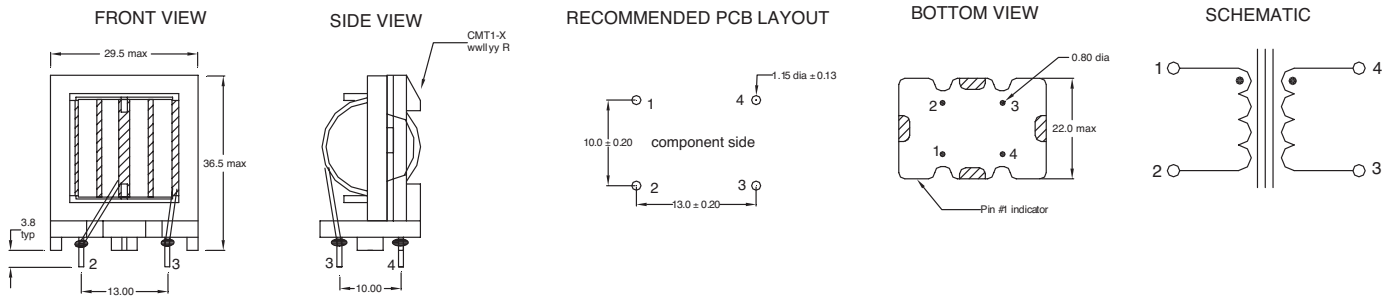
OCL = Open Circuit Inductance
DCR = Direct Current Resistance
I_{rms} = rms current for 40°C max temperature rise at worst case ambient temperature of 85°C.

Electrical Characteristics:

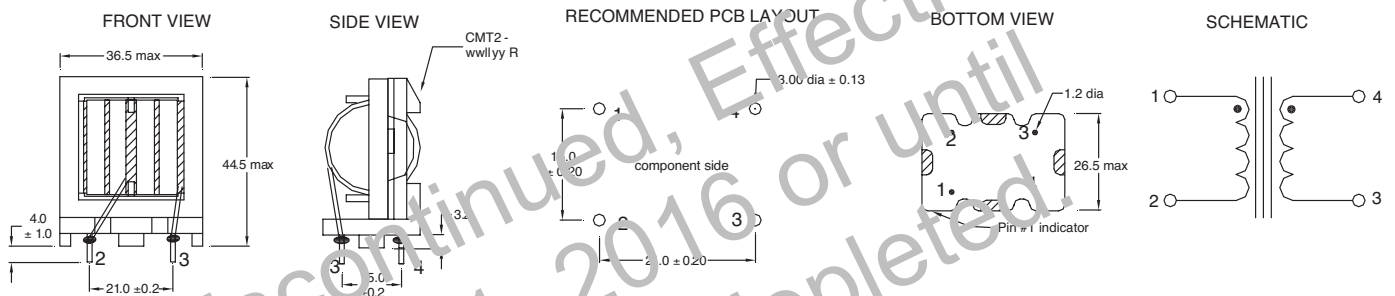
OCL (1-2) 0.10Vrms, 10kHz, 0.0Adc: (See Chart)
OCL (4-3) 0.10Vrms, 10kHz, 0.0Adc: (See Chart)
DCR (1-2) typ @ 20°C: (See Chart)
DCR (4-3) typ @ 20°C: (See Chart)
Hipot rating: winding to winding: 2400 Vac for 1 second. Turns Ratio: (1-2):(4-3) 1:1

Dimensions—mm

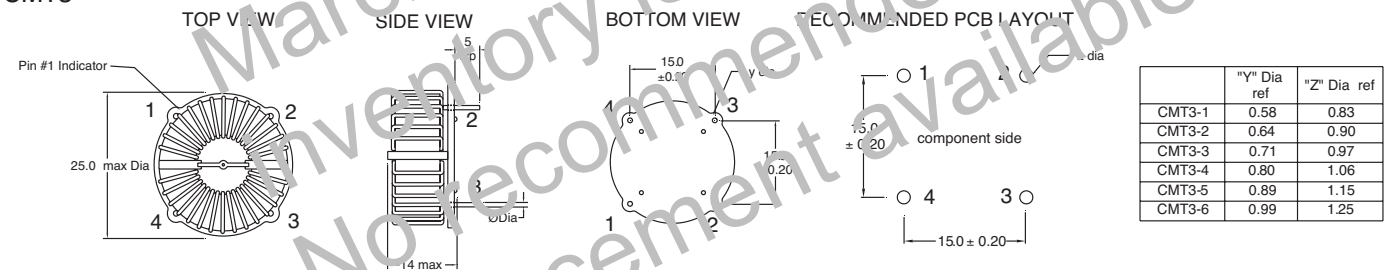
CMT1



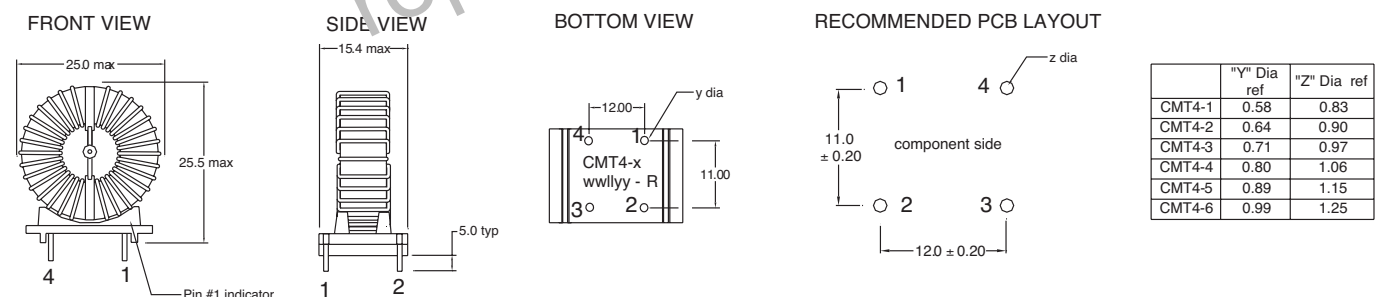
CMT2



CMT3



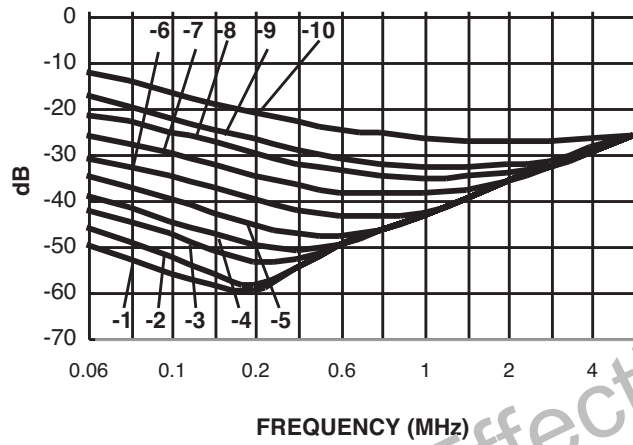
CMT4



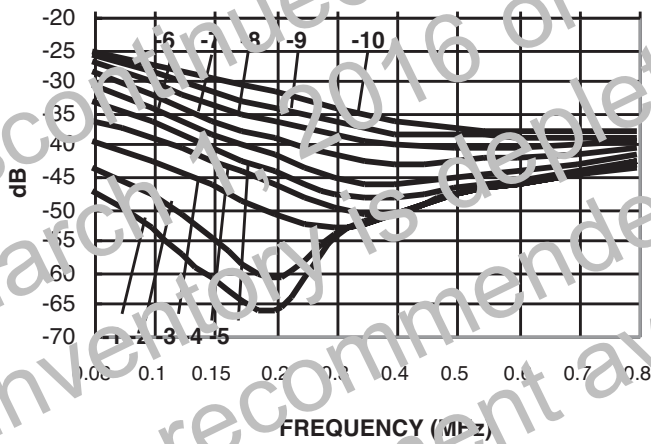
(1) All Dimensions are in millimeters unless otherwise specified
 (2) Tolerances are +/- 0.20mm unless stated otherwise.
 (3) wwlyy = (Date Code) R = (Revision Level)
 Schematic is the same for all the series

Attenuation Curves

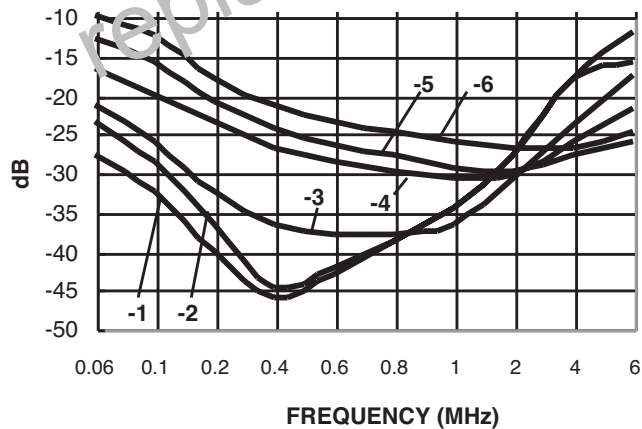
Attenuation CMT1



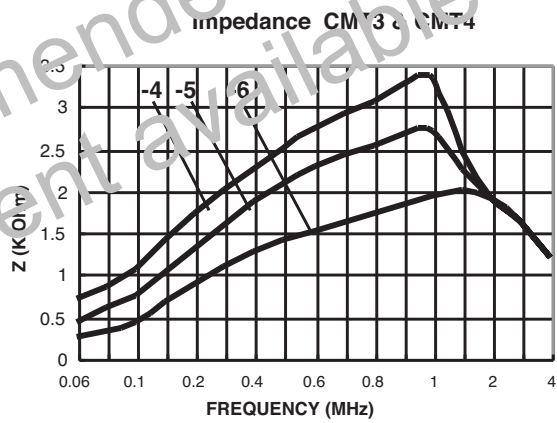
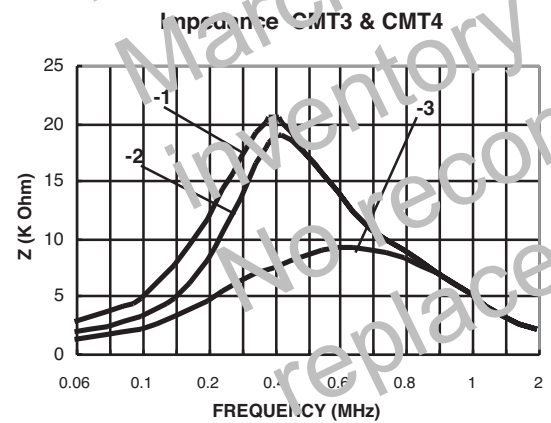
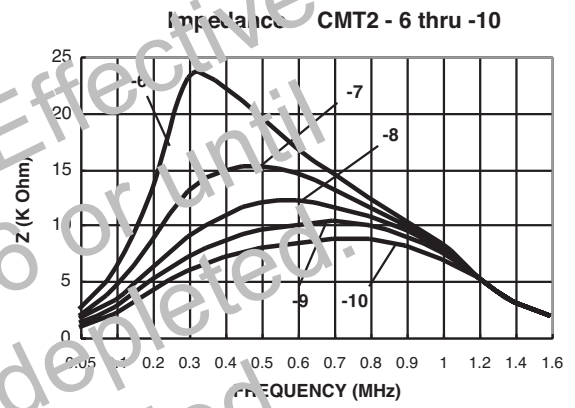
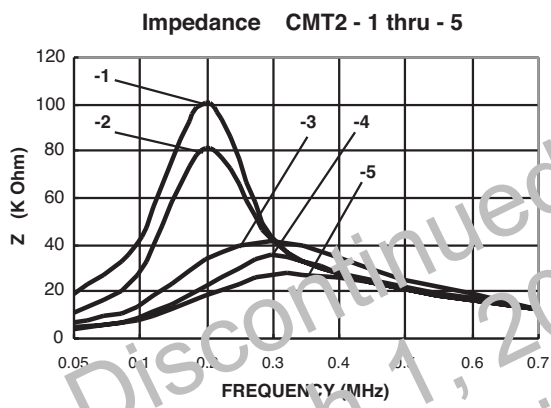
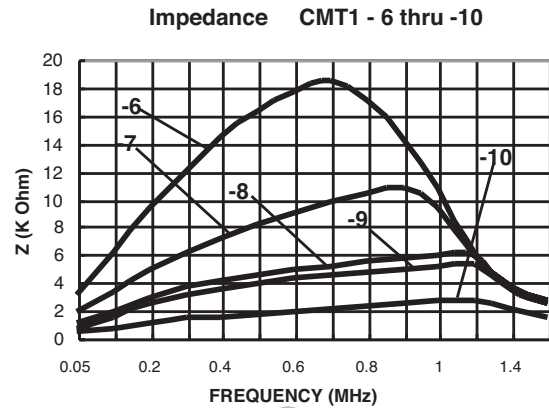
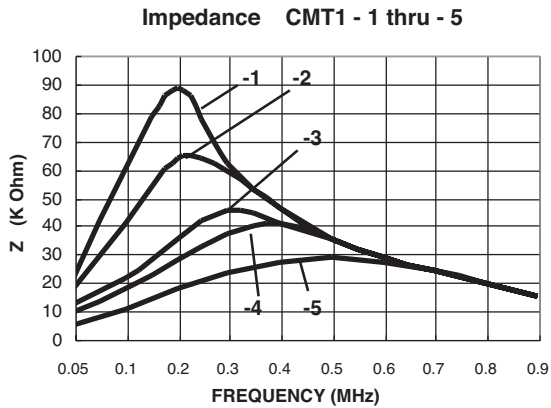
Attenuation CMT2



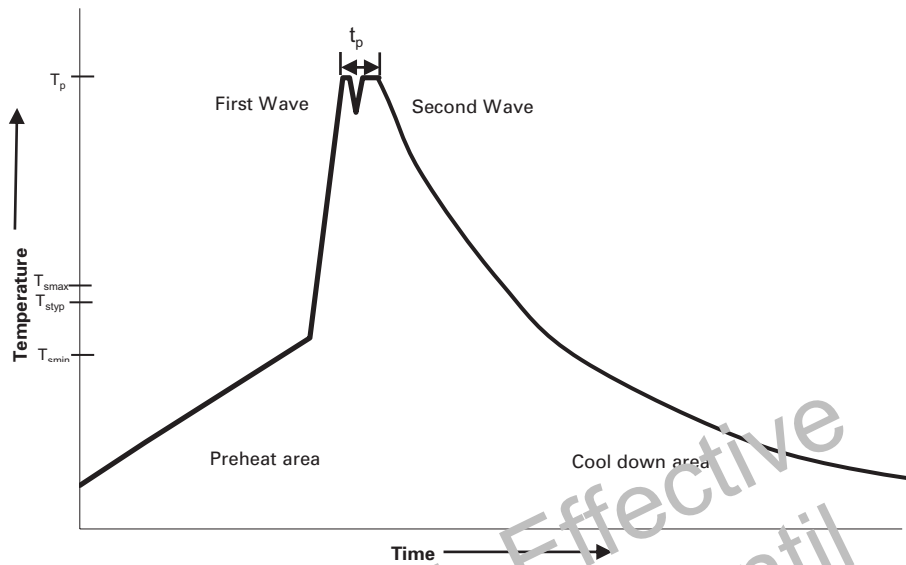
Attenuation CMT3 & CMT4



Impedance Curves



Wave solder profile



Reference EN 61760-1:2006

Profile Feature	Standard 61SnPb Solder	Lead (Pb) Free Solder
Preheat		
• Temperature min. (T_{smin})	100°C	100°C
• Temperature typ. (T_{styp})	120°C	120°C
• Temperature max. (T_{smax})	130°C	130°C
• Time (T_{smin} to T_{smax}) (t_s)	70 seconds	70 seconds
Δ preheat to max Temperature	150°C max.	150°C max.
Peak temperature (T_p)*	235°C - 260°C	230°C - 260°C
Time at peak temperature (t_p)	10 seconds max 5 seconds max each wave	10 seconds max 5 seconds max each wave
Ramp-down rate	~ 2 K/s min ~3.5 K/s typ ~5 K/s max	~ 2 K/s min ~3.5 K/s typ ~5 K/s max
Time 25°C to 25°C	4 minutes	4 minutes

Manual solder

350°C, 4-5 seconds. (by soldering iron), generally manual, hand soldering is not recommended.

Life Support Policy: Eaton does not authorize the use of any of its products for use in life support devices or systems without the express written approval of an officer of the Company. Life support systems are devices which support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

Eaton reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Eaton also reserves the right to change or update, without notice, any technical information contained in this bulletin.

Eaton
Electronics Division
1000 Eaton Boulevard
Cleveland, OH 44122
United States
www.eaton.com/elx

© 2015 Eaton
All Rights Reserved
Printed in USA
Publication No. 4312
October 2015

Eaton is a registered trademark.

All other trademarks are property of their respective owners.