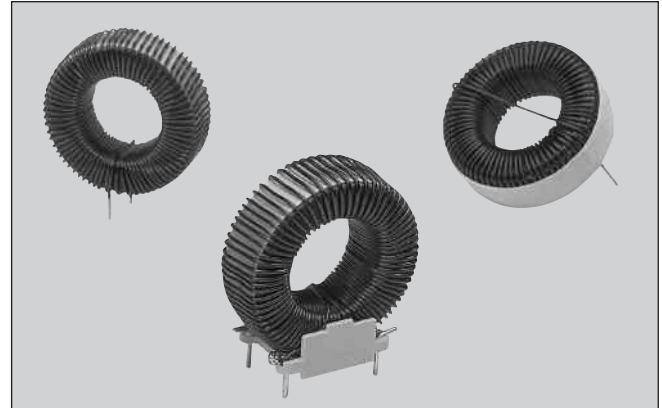


Description

- Low loss, powdered iron cores with stable electrical operating characteristics maximize inductor efficiency by minimizing copper losses
- Available in vertical and horizontal self leaded and header mounted configurations
- Inductance values range from 10uH to 1000uH
- Current values range from 1.5 to 29.5 Amps
- Meets UL 94V-0 flammability standard
- Powder Iron core material



Applications

- Filters
- Buck and boost switches
- Chokes

Environmental Data

- Storage temperature range: -40°C to +105°C
- Operating ambient temperature range: -40°C to +75°C (range is application specific)

Packaging

- Supplied in bulk packaging

Family Table

Vertical Part Number	Horizontal Part Number	Header Mounted Part Number	Inductance μH (rated)	OCL ⁽¹⁾ μH +/- 20%	I _{DC} ⁽²⁾ Amperes	I _{SAT} ⁽³⁾ Amperes	Volt- μSec ⁽⁴⁾ μVs	Energy ⁽⁵⁾ μJ	DCR (Ω) ⁽⁶⁾ max
CTX10-1-52-R	CTX10-1-52LP-R	CTX10-1-52M-R	10	10.14	2.4	2.1	5.4	15	0.0481
CTX20-1-52-R	CTX20-1-52LP-R	CTX20-1-52M-R	20	20.22	1.8	2.2	7.8	36	0.0829
CTX50-1-52-R	CTX50-1-52LP-R	CTX50-1-52M-R	50	50.29	2.6	2.7	16.3	130	0.0715
CTX100-1-52-R	CTX100-1-52LP-R	CTX100-1-52M-R	100	100.40	2.5	2.4	27.5	197	0.1060
CTX150-1-52-R	CTX150-1-52LP-R	CTX150-1-52M-R	150	151.70	2.1	2.3	35.7	283	0.1620
CTX250-1-52-R	CTX250-1-52LP-R	CTX250-1-52M-R	250	250.90	1.9	2.2	47.8	421	0.2210
CTX500-1-52-R	CTX500-1-52LP-R	CTX500-1-52M-R	500	505.00	1.7	1.9	77.9	645	0.3610
CTX750-1-52-R	CTX750-1-52LP-R	CTX750-1-52M-R	750	754.40	1.8	2.4	114.3	1530	0.4340
CTX1000-1-52-R	CTX1000-1-52LP-R	CTX1000-1-52M-R	1000	1004.00	1.5	2.1	131.9	1530	0.6380
CTX10-2-52-R	CTX10-2-52LP-R	CTX10-2-52M-R	10	9.60	4.7	4.5	6.6	68	0.0183
CTX20-2-52-R	CTX20-2-52LP-R	CTX20-2-52M-R	20	19.60	3.2	3.2	9.4	69	0.0392
CTX50-2-52-R	CTX50-2-52LP-R	CTX50-2-52M-R	50	50.00	4.9	4.9	21.3	420	0.0326
CTX100-2-52-R	CTX100-2-52LP-R	CTX100-2-52M-R	100	101.70	4.4	4.3	35.0	643	0.0534
CTX150-2-52-R	CTX150-2-52LP-R	CTX150-2-52M-R	150	148.00	4.3	4.0	47.6	829	0.0719
CTX250-2-52-R	CTX250-2-52LP-R	CTX250-2-52M-R	250	251.10	4.2	4.2	66.0	1540	0.0833
CTX500-2-52-R	CTX500-2-52LP-R	CTX500-2-52M-R	500	499.40	3.1	3.3	104.0	1890	0.1830
CTX750-2-52-R	CTX750-2-52LP-R	CTX750-2-52M-R	750	749.30	3.4	3.4	147.3	2960	0.2080
CTX10-5-52-R	CTX10-5-52LP-R	CTX10-5-52M-R	10	9.68	8.7	11.1	9.4	417	0.0104
CTX20-5-52-R	CTX20-5-52LP-R	CTX20-5-52M-R	20	21.25	7.8	9.3	16.0	643	0.0260
CTX50-5-52-R	CTX50-5-52LP-R	CTX50-5-52M-R	50	49.60	7.6	9.4	29.3	1530	0.0248
CTX100-5-52-R	CTX100-5-52LP-R	CTX100-5-52M-R	100	97.20	8.2	7.5	45.7	1890	0.0267
CTX150-5-52-R	CTX150-5-52LP-R	CTX150-5-52M-R	150	150.60	7.7	7.5	66.0	2960	0.0401
CTX250-5-52-R	CTX250-5-52LP-R		250	254.40	9.2	8.1	102.4	5860	0.0400
CTX10-7-52-R	CTX10-7-52LP-R	CTX10-7-52M-R	10	10.04	11.4	13.5	11.0	640	0.0080
CTX20-7-52-R	CTX20-7-52LP-R	CTX20-7-52M-R	20	20.96	11.4	14.5	19.1	1540	0.0110
CTX50-7-52-R	CTX50-7-52LP-R	CTX50-7-52M-R	50	52.27	10.5	10.2	33.5	1900	0.0163
CTX100-7-52-R	CTX100-7-52LP-R		100	101.40	12.0	9.1	54.2	2960	0.0167
CTX150-7-52-R	CTX150-7-52LP-R		150	152.80	12.8	10.5	79.3	5900	0.0204
CTX10-10-52-R	CTX10-10-52LP-R		10	10.04	16.9	20.9	13.2	1530	0.0051
CTX20-10-52-R	CTX20-10-52LP-R		20	21.17	16.0	16.0	21.3	1900	0.0070
CTX50-10-52-R	CTX50-10-52LP-R		50	52.37	13.9	12.7	38.9	2960	0.0124
CTX100-10-52-R	CTX100-10-52LP-R		100	99.38	17.6	13.0	64.0	5880	0.0109
CTX10-16-52-R	CTX10-16-52LP-R		10	9.90	27.3	29.3	16.9	2970	0.0032
CTX20-16-52-R	CTX20-16-52LP-R		20	19.24	31.5	29.5	28.1	5860	0.0034

Notes:

- (1) Open circuit inductance test parameters: 100kHz, 0.250Vrms, 0 Adc.
- (2) DC current for an approximate ΔT of 30°C at 75°C Ambient with no core loss. See Chart 2 for derating of I_{DC} with core loss.
- (3) Peak current for an approximate 30% roll-off in OCL. For other current levels see Chart 1.
- (4) Applied Volt-Time product (V μ S) across the inductor. This value represents the V μ S at 100kHz necessary to generate a core loss equal to 10% of the total losses for 30°C rise. For other frequencies and operating levels see Chart 2. (Note: skin effect losses not included.)
- (5) Energy storage (μ J) at I_{SAT}. For other current levels see Chart 1.
- (6) Maximum D.C. resistance at 20°C.

Mechanical Diagrams

Vertical and Horizontal Self Leaded Mounting Options								
Vertical P/N See Figure 1	Horizontal P/N See Figure 2	OD (max)	ID (typ)	Ht (max)	X (typ)	Y (typ)	T (typ)	H (typ)
CTX10-1-52-R	CTX10-1-52LP-R	8.6	0.0	4.7	3.8	7.3	0.42	0.67
CTX20-1-52-R	CTX20-1-52LP-R	9.1	0.0	6.7	5.6	7.4	0.37	0.62
CTX50-1-52-R	CTX50-1-52LP-R	16.2	4.2	9.0	7.5	13.7	0.58	0.83
CTX100-1-52-R	CTX100-1-52LP-R	15.5	4.2	12.4	10.7	13.7	0.58	0.83
CTX150-1-52-R	CTX150-1-52LP-R	20.7	6.6	9.4	7.8	18.8	0.52	0.77
CTX250-1-52-R	CTX250-1-52LP-R	20.9	6.0	13.0	11.0	18.8	0.52	0.77
CTX500-1-52-R	CTX500-1-52LP-R	24.0	9.0	15.3	14.0	21.2	0.52	0.77
CTX750-1-52-R	CTX750-1-52LP-R	29.8	11.7	17.4	15.6	28.2	0.52	0.77
CTX1000-1-52-R	CTX1000-1-52LP-R	29.8	11.7	17.1	15.5	28.0	0.46	0.71
CTX10-2-52-R	CTX10-2-52LP-R	12.7	0.0	7.8	6.3	11.0	0.71	0.96
CTX20-2-52-R	CTX20-2-52LP-R	12.5	0.0	7.5	6.3	11.0	0.58	0.83
CTX50-2-52-R	CTX50-2-52LP-R	21.6	6.1	13.6	11.0	19.5	0.89	1.14
CTX100-2-52-R	CTX100-2-52LP-R	24.0	8.8	16.6	13.9	21.8	0.89	1.14
CTX150-2-52-R	CTX150-2-52LP-R	30.6	11.2	11.4	9.3	28.5	0.80	1.05
CTX250-2-52-R	CTX250-2-52LP-R	31.2	9.1	19.0	15.7	28.5	0.89	1.14
CTX500-2-52-R	CTX500-2-52LP-R	36.7	11.7	14.8	12.5	34.5	0.71	0.96
CTX750-2-52-R	CTX750-2-52LP-R	43.3	19.9	18.2	15.8	41.5	0.80	1.05
CTX10-5-52-R	CTX10-5-52LP-R	22.2	5.4	13.9	11.5	19.9	1.11	1.36
CTX20-5-52-R	CTX20-5-52LP-R	24.5	8.8	16.6	14.5	22.0	0.89	1.14
CTX50-5-52-R	CTX50-5-52LP-R	32.3	10.1	18.9	16.5	28.8	1.11	1.36
CTX100-5-52-R	CTX100-5-52LP-R	37.8	11.2	16.8	13.6	35.5	1.24	1.49
CTX150-5-52-R	CTX150-5-52LP-R	46.4	18.8	19.8	16.8	43.4	1.24	1.49
CTX250-5-52-R	CTX250-5-52LP-R	53.7	18.8	24.3	20.1	49.4	1.38	1.63
CTX10-7-52-R	CTX10-7-52LP-R	25.7	6.5	18.0	16.0	22.4	1.38	1.63
CTX20-7-52-R	CTX20-7-52LP-R	32.4	8.5	19.8	16.8	29.2	1.38	1.63
CTX50-7-52-R	CTX50-7-52LP-R	39.0	10.8	16.8	13.9	35.7	1.38	1.63
CTX100-7-52-R	CTX100-7-52LP-R	48.5	17.1	21.8	17.2	43.4	1.73	1.98
CTX150-7-52-R	CTX150-7-52LP-R	54.5	17.1	25.4	21.2	50.9	1.73	1.98
CTX10-10-52-R	CTX10-10-52LP-R	34.0	7.0	21.4	17.0	29.6	1.73	1.98
CTX20-10-52-R	CTX20-10-52LP-R	40.5	9.0	18.0	14.3	35.2	1.73	1.98
CTX50-10-52-R	CTX50-10-52LP-R	47.5	17.1	21.3	17.5	42.8	1.73	1.98
CTX100-10-52-R	CTX100-10-52LP-R	57.0	15.0	27.5	21.3	50.6	2.15	2.45
CTX10-16-52-R	CTX10-16-52LP-R	50.3	13.0	24.0	18.6	43.0	2.41	2.70
CTX20-16-52-R	CTX20-16-52LP-R	59.0	13.0	28.0	23.0	50.7	2.69	2.99

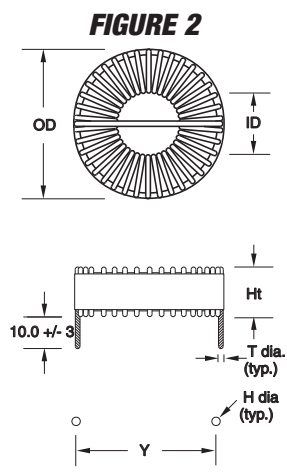
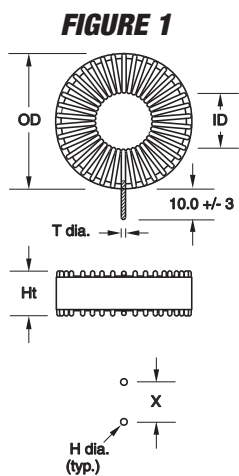
Note: All dimensions are in millimeters.



**VERTICAL
SELF LEADED
MOUNT**



**HORIZONTAL
SELF LEADED
MOUNT**

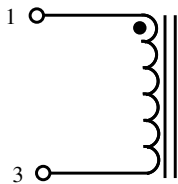


Drawings are not to scale.

Header Mounted Option										
Header Mounted Part Number	See Figure #	OD (max)	A (max)	B (max)	C (max)	X (typ)	Y (typ)	T (typ)	H (typ)	
CTX10-1-52M-R	3	8.6	9.4	9.4	6.9	6.5	6.5	—	—	
CTX20-1-52M-R	3	9.1	9.4	9.4	9.0	6.5	6.5	—	—	
CTX50-1-52M-R	4	16.2	19.6	16.1	20.0	15.3	6.4	—	—	
CTX100-1-52M-R	4	15.5	19.6	16.1	19.7	15.3	6.4	—	—	
CTX150-1-52M-R	4	20.7	19.6	16.1	24.2	15.3	6.4	—	—	
CTX250-1-52M-R	5	20.9	31.0	16.0	22.5	20.3	10.2	1.20	1.45	
CTX500-1-52M-R	5	24.0	35.4	21.7	25.0	23.0	15.4	1.20	1.45	
CTX750-1-52M-R	5	29.8	35.4	21.7	31.6	23.0	15.4	1.20	1.45	
CTX1000-1-52M-R	5	29.8	35.4	21.7	31.2	23.0	15.4	1.20	1.45	
CTX10-2-52M-R	3	12.7	13.6	11.4	11.7	10.8	7.5	—	—	
CTX20-2-52M-R	3	12.5	13.6	11.4	11.4	10.8	7.5	—	—	
CTX50-2-52M-R	5	21.6	31.0	16.0	23.5	20.3	10.2	1.20	1.45	
CTX100-2-52M-R	5	24.0	35.4	21.7	26.0	23.0	15.4	1.20	1.45	
CTX150-2-52M-R	5	30.6	31.0	16.0	32.5	20.3	10.2	1.20	1.45	
CTX250-2-52M-R	5	31.2	35.4	21.7	33.4	23.0	15.4	1.20	1.45	
CTX500-2-52M-R	5	36.7	31.0	16.0	38.4	20.3	10.2	1.20	1.45	
CTX750-2-52M-R	5	43.3	35.4	21.7	45.4	23.0	15.4	1.20	1.45	
CTX10-5-52M-R	5	22.2	31.0	16.0	22.7	20.3	10.2	1.20	1.45	
CTX20-5-52M-R	5	24.5	35.4	21.7	25.5	23.0	15.4	1.20	1.45	
CTX50-5-52M-R	5	32.3	35.4	21.7	33.7	23.0	15.4	1.11	1.36	
CTX100-5-52M-R	5	37.8	35.4	21.7	40.2	23.0	15.4	1.24	1.49	
CTX150-5-52M-R	5	46.4	35.4	21.7	47.0	23.0	15.4	1.24	1.49	
CTX10-7-52M-R	5	25.7	35.4	21.7	26.7	23.0	15.4	1.38	1.63	
CTX20-7-52M-R	5	32.4	35.4	21.7	34.2	23.0	15.4	1.38	1.63	
CTX50-7-52M-R	5	39.0	35.4	21.7	40.3	23.0	15.4	1.38	1.63	

Note: All dimensions are in millimeters.

CONNECTION DIAGRAM



HEADER MOUNT

FIGURE 3

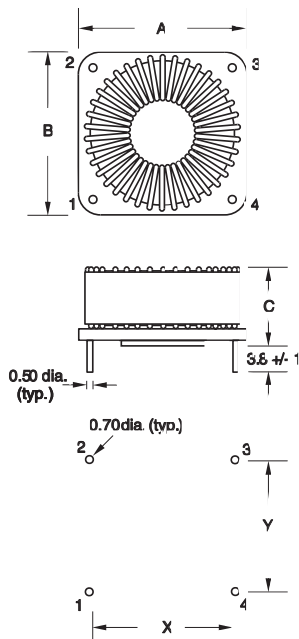


FIGURE 4

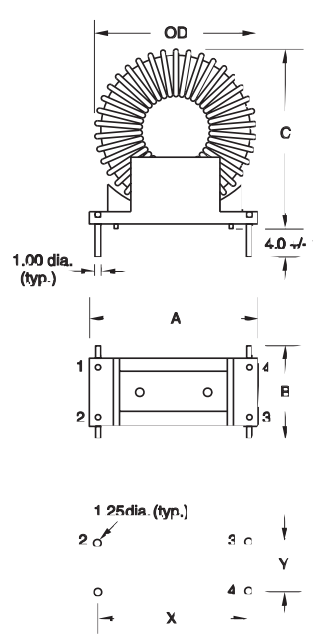
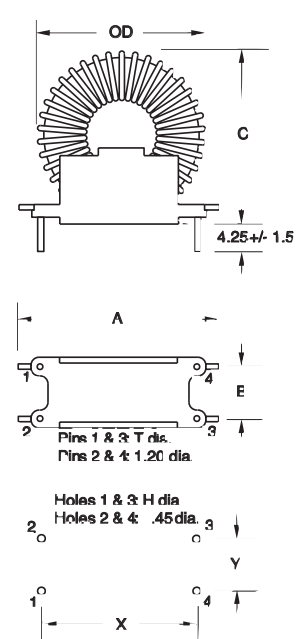
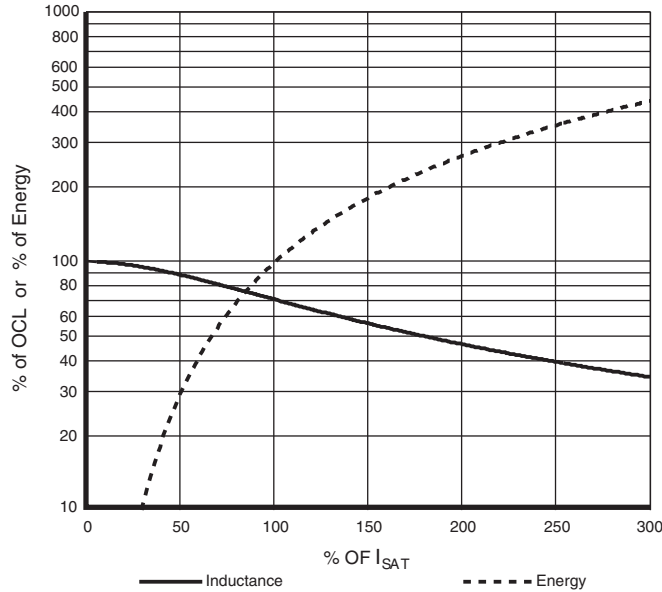


FIGURE 5

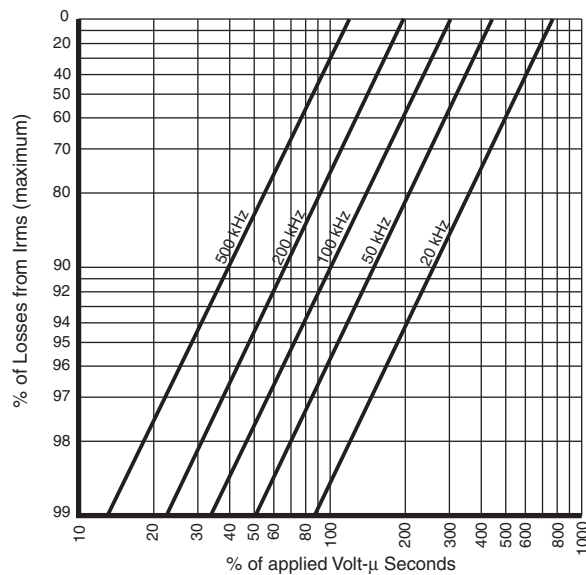


Drawings are not to scale.

Inductance Characteristics



Core Loss



This bulletin is intended to present product design solutions and technical information that will help the end user with design applications. Cooper Electronic Technologies reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Cooper Electronic Technologies also reserves the right to change or update, without notice, any technical information contained in this bulletin. Once a product has been selected, it should be tested by the user in all possible applications.

Life Support Policy: Cooper Electronic Technologies 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.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Fixed Inductors](#) category:

Click to view products by [Eaton](#) manufacturer:

Other Similar products are found below :

[MLZ1608M6R8WTD25](#) [MLZ1608N6R8LT000](#) [MLZ1608N3R3LTD25](#) [MLZ1608N3R3LT000](#) [MLZ1608N150LT000](#)

[MLZ1608M150WTD25](#) [MLZ1608M3R3WTD25](#) [MLZ1608M3R3WT000](#) [MLZ1608M150WT000](#) [MLZ1608A1R5WT000](#)

[MLZ1608N1R5LT000](#) [B82432C1333K000](#) [PCMB053T-1R0MS](#) [PCMB053T-1R5MS](#) [PCMB104T-1R5MS](#) [CR32NP-100KC](#) [CR32NP-](#)

[151KC](#) [CR32NP-180KC](#) [CR32NP-181KC](#) [CR32NP-1R5MC](#) [CR32NP-390KC](#) [CR32NP-3R9MC](#) [CR32NP-680KC](#) [CR32NP-820KC](#)

[CR32NP-8R2MC](#) [CR43NP-390KC](#) [CR43NP-560KC](#) [CR43NP-680KC](#) [CR54NP-181KC](#) [CR54NP-470LC](#) [CR54NP-820KC](#) [CR54NP-8R5MC](#)

[MGDQ4-00004-P](#) [MGDU1-00016-P](#) [MHL1ECTTP18NJ](#) [MHL1JCTTD12NJ](#) [PE-51506NL](#) [PE-53601NL](#) [PE-53630NL](#) [PE-53824SNLT](#) [PE-](#)

[62892NL](#) [PE-92100NL](#) [PG0434.801NLT](#) [PG0936.113NLT](#) [PM06-2N7](#) [PM06-39NJ](#) [HC2LP-R47-R](#) [HC2-R47-R](#) [HC3-2R2-R](#) [HC8-1R2-R](#)