

# LCPI

LOW COST POWER INDUCTORS

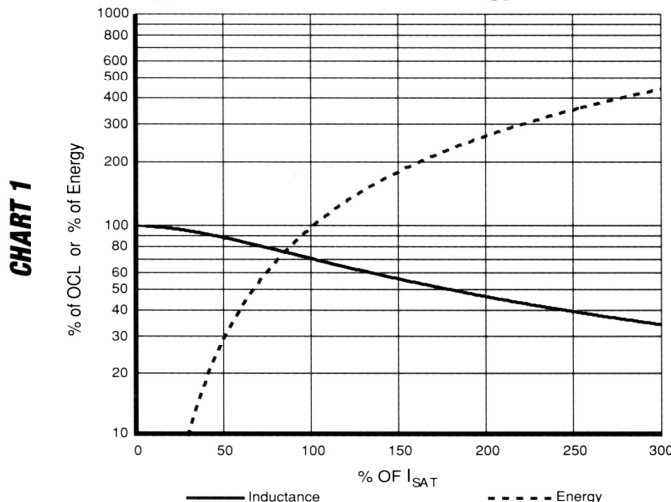
## LOW COST POWER INDUCTOR FAMILY TABLE

| Vertical Part Number | Horizontal Part Number | Header Mounted Part Number | Inductance $\mu\text{H}$ (rated) | OCL <sup>(1)</sup> $\mu\text{H} \pm 20\%$ | I <sub>DC</sub> <sup>(2)</sup> Amperes | I <sub>SAT</sub> <sup>(3)</sup> Amperes | Volt- $\mu\text{Sec}$ <sup>(4)</sup> V $\mu\text{S}$ | Energy <sup>(5)</sup> $\mu\text{J}$ | DCR ( $\Omega$ ) <sup>(6)</sup> max |
|----------------------|------------------------|----------------------------|----------------------------------|-------------------------------------------|----------------------------------------|-----------------------------------------|------------------------------------------------------|-------------------------------------|-------------------------------------|
| CTX10-1-52           | CTX10-1-52LP           | CTX10-1-52M                | 10                               | 10.14                                     | 2.4                                    | 2.1                                     | 5.4                                                  | 15                                  | 0.0481                              |
| <b>*CTX20-1-52</b>   | CTX20-1-52LP           | <b>*CTX20-1-52M</b>        | 20                               | 20.22                                     | 1.8                                    | 2.2                                     | 7.8                                                  | 36                                  | 0.0829                              |
| <b>*CTX50-1-52</b>   | CTX50-1-52LP           | <b>*CTX50-1-52M</b>        | 50                               | 50.29                                     | 2.6                                    | 2.7                                     | 16.3                                                 | 130                                 | 0.0715                              |
| <b>*CTX100-1-52</b>  | CTX100-1-52LP          | <b>*CTX100-1-52M</b>       | 100                              | 100.40                                    | 2.5                                    | 2.4                                     | 27.5                                                 | 197                                 | 0.1060                              |
| CTX150-1-52          | CTX150-1-52LP          | CTX150-1-52M               | 150                              | 151.70                                    | 2.1                                    | 2.3                                     | 35.7                                                 | 283                                 | 0.1620                              |
| CTX250-1-52          | CTX250-1-52LP          | CTX250-1-52M               | 250                              | 250.90                                    | 1.9                                    | 2.2                                     | 47.8                                                 | 421                                 | 0.2210                              |
| CTX500-1-52          | CTX500-1-52LP          | CTX500-1-52M               | 500                              | 505.00                                    | 1.7                                    | 1.9                                     | 77.9                                                 | 645                                 | 0.3610                              |
| CTX750-1-52          | CTX750-1-52LP          | CTX750-1-52M               | 750                              | 754.40                                    | 1.8                                    | 2.4                                     | 114.3                                                | 1530                                | 0.4340                              |
| CTX1000-1-52         | CTX1000-1-52LP         | CTX1000-1-52M              | 1000                             | 1004.00                                   | 1.5                                    | 2.1                                     | 131.9                                                | 1530                                | 0.6380                              |
| CTX10-2-52           | CTX10-2-52LP           | CTX10-2-52M                | 10                               | 9.60                                      | 4.7                                    | 4.5                                     | 6.6                                                  | 68                                  | 0.0183                              |
| <b>*CTX20-2-52</b>   | CTX20-2-52LP           | <b>*CTX20-2-52M</b>        | 20                               | 19.60                                     | 3.2                                    | 3.2                                     | 9.4                                                  | 69                                  | 0.0392                              |
| <b>*CTX50-2-52</b>   | CTX50-2-52LP           | <b>*CTX50-2-52M</b>        | 50                               | 50.00                                     | 4.9                                    | 4.9                                     | 21.3                                                 | 420                                 | 0.0326                              |
| <b>*CTX100-2-52</b>  | CTX100-2-52LP          | <b>*CTX100-2-52M</b>       | 100                              | 101.70                                    | 4.4                                    | 4.3                                     | 35.0                                                 | 643                                 | 0.0534                              |
| CTX150-2-52          | CTX150-2-52LP          | CTX150-2-52M               | 150                              | 148.00                                    | 4.3                                    | 4.0                                     | 47.6                                                 | 829                                 | 0.0719                              |
| CTX250-2-52          | CTX250-2-52LP          | CTX250-2-52M               | 250                              | 251.10                                    | 4.2                                    | 4.2                                     | 66.0                                                 | 1540                                | 0.0833                              |
| CTX500-2-52          | CTX500-2-52LP          | CTX500-2-52M               | 500                              | 499.40                                    | 3.1                                    | 3.3                                     | 104.0                                                | 1890                                | 0.1830                              |
| CTX750-2-52          | CTX750-2-52LP          | CTX750-2-52M               | 750                              | 749.30                                    | 3.4                                    | 3.4                                     | 147.3                                                | 2960                                | 0.2080                              |
| CTX10-5-52           | CTX10-5-52LP           | CTX10-5-52M                | 10                               | 9.68                                      | 8.7                                    | 11.1                                    | 9.4                                                  | 417                                 | 0.0104                              |
| <b>*CTX20-5-52</b>   | CTX20-5-52LP           | <b>*CTX20-5-52M</b>        | 20                               | 21.25                                     | 7.8                                    | 9.3                                     | 16.0                                                 | 643                                 | 0.0260                              |
| <b>*CTX50-5-52</b>   | CTX50-5-52LP           | <b>*CTX50-5-52M</b>        | 50                               | 49.60                                     | 7.6                                    | 9.4                                     | 29.3                                                 | 1530                                | 0.0248                              |
| CTX100-5-52          | CTX100-5-52LP          | CTX100-5-52M               | 100                              | 97.20                                     | 8.2                                    | 7.5                                     | 45.7                                                 | 1890                                | 0.0267                              |
| CTX150-5-52          | CTX150-5-52LP          | CTX150-5-52M               | 150                              | 150.60                                    | 7.7                                    | 7.5                                     | 66.0                                                 | 2960                                | 0.0401                              |
| CTX250-5-52          | CTX250-5-52LP          |                            | 250                              | 254.40                                    | 9.2                                    | 8.1                                     | 102.4                                                | 5860                                | 0.0400                              |
| CTX10-7-52           | CTX10-7-52LP           | CTX10-7-52M                | 10                               | 10.04                                     | 11.4                                   | 13.5                                    | 11.0                                                 | 640                                 | 0.0080                              |
| CTX20-7-52           | CTX20-7-52LP           | CTX20-7-52M                | 20                               | 20.96                                     | 11.4                                   | 14.5                                    | 19.1                                                 | 1540                                | 0.0110                              |
| CTX50-7-52           | CTX50-7-52LP           | CTX50-7-52M                | 50                               | 52.27                                     | 10.5                                   | 10.2                                    | 33.5                                                 | 1900                                | 0.0163                              |
| CTX100-7-52          | CTX100-7-52LP          |                            | 100                              | 101.40                                    | 12.0                                   | 9.1                                     | 54.2                                                 | 2960                                | 0.0167                              |
| CTX150-7-52          | CTX150-7-52LP          |                            | 150                              | 152.80                                    | 12.8                                   | 10.5                                    | 79.3                                                 | 5900                                | 0.0204                              |
| CTX10-10-52          | CTX10-10-52LP          |                            | 10                               | 10.04                                     | 16.9                                   | 20.9                                    | 13.2                                                 | 1530                                | 0.0051                              |
| CTX20-10-52          | CTX20-10-52LP          |                            | 20                               | 21.17                                     | 16.0                                   | 16.0                                    | 21.3                                                 | 1900                                | 0.0070                              |
| CTX50-10-52          | CTX50-10-52LP          |                            | 50                               | 52.37                                     | 13.9                                   | 12.7                                    | 38.9                                                 | 2960                                | 0.0124                              |
| CTX100-10-52         | CTX100-10-52LP         |                            | 100                              | 99.38                                     | 17.6                                   | 13.0                                    | 64.0                                                 | 5880                                | 0.0109                              |
| CTX10-16-52          | CTX10-16-52LP          |                            | 10                               | 9.90                                      | 27.3                                   | 29.3                                    | 16.9                                                 | 2970                                | 0.0032                              |
| CTX20-16-52          | CTX20-16-52LP          |                            | 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  $\Delta T$  of 30°C at 75°C Ambient with no core loss. See Chart 2 for derating of I<sub>DC</sub> 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 $\mu\text{S}$ ) across the inductor. This value represents the V $\mu\text{S}$  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 ( $\mu\text{J}$ ) at I<sub>SAT</sub>. For other current levels see Chart 1.  
(6) Maximum D.C. resistance at 20°C.

\* BOLD are available from stock.

**Typical Inductance and Energy vs DC Current**



**I<sub>DC</sub> Derating with Core Loss**

