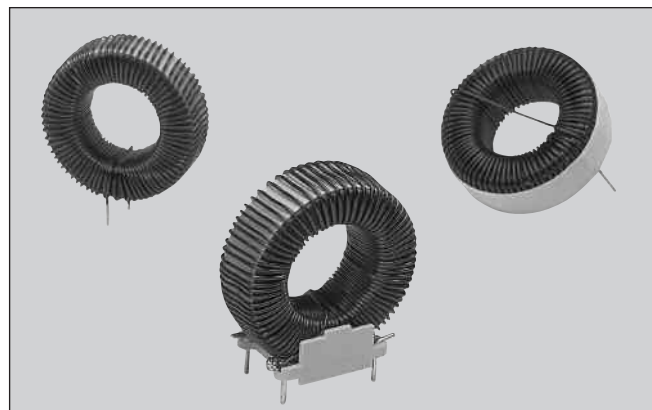


### Description

- 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 $\mu\text{H}$ (rated) | OCL <sup>(1)</sup> $\mu\text{H}$ +/- 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-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  $\Delta T$  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.

### Mechanical Diagrams

| <b>Vertical and Horizontal Self Leaded Mounting Options</b> |                                        |                     |                     |                     |                    |                    |                    |                    |
|-------------------------------------------------------------|----------------------------------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Vertical P/N<br/>See Figure 1</b>                        | <b>Horizontal P/N<br/>See Figure 2</b> | <b>OD<br/>(max)</b> | <b>ID<br/>(typ)</b> | <b>Ht<br/>(max)</b> | <b>X<br/>(typ)</b> | <b>Y<br/>(typ)</b> | <b>T<br/>(typ)</b> | <b>H<br/>(typ)</b> |
| 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               |

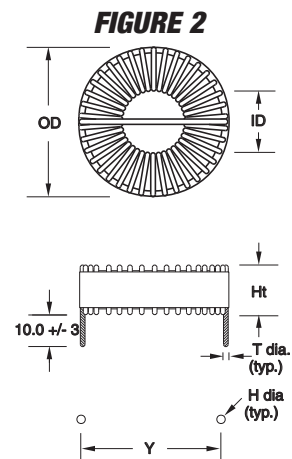
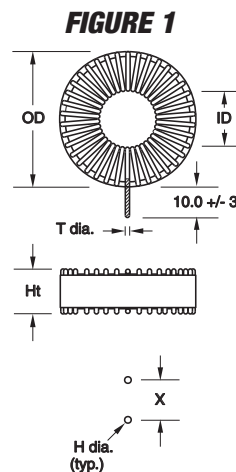
Note: All dimensions are in millimeters.



**VERTICAL  
SELF LEADED  
MOUNT**



**HORIZONTAL  
SELF LEADED  
MOUNT**



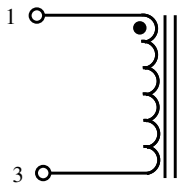
Drawings are not to scale.

### 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

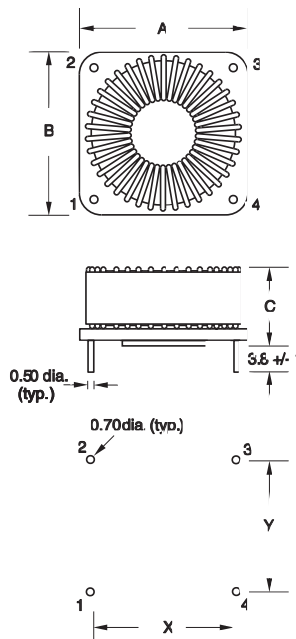


FIGURE 4

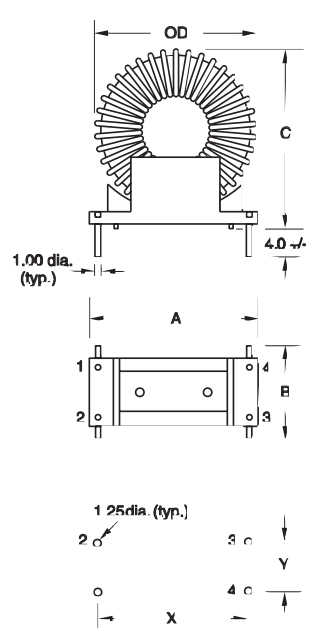
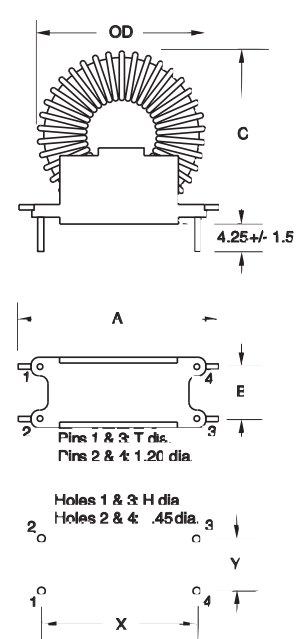
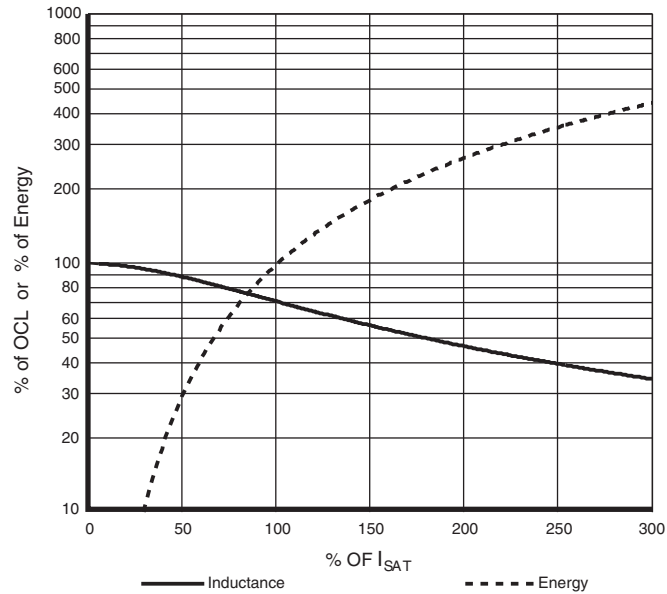


FIGURE 5

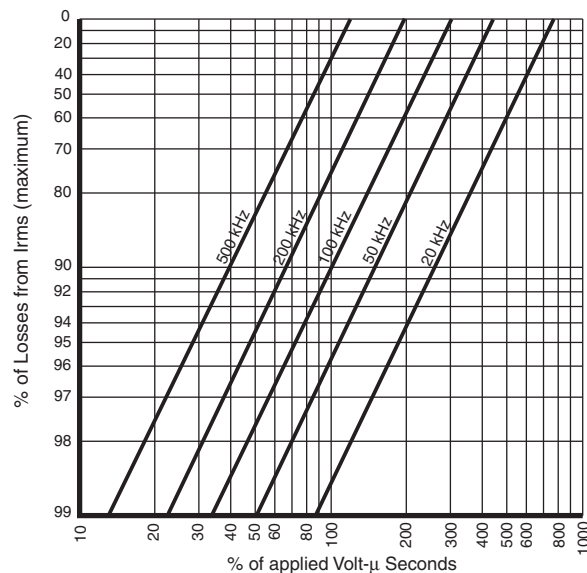


Drawings are not to scale.

## Inductance Characteristics



## Core Loss





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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