

# Power Inductors – RFB Series



- Low cost, high current power inductors
- 0.9  $\mu$ H to 18 mH inductance range
- RFB0810 and RFB1010 have a flame retardant polyolefin wrap to protect the winding.

**Core material** Ferrite

**Terminations** Tin-silver over tin over copper over steel. Other terminations available at additional cost.

**Ambient temperature**  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  with  $I_{\text{rms}}$  current,  $+85^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  with derated current

**Storage temperature** Component:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ .  
Tray packaging:  $-40^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at  $<30^{\circ}\text{C}$  / 85% relative humidity)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**  
38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**Packaging** 150 parts per tray; optional fanfold tape for RFB0807 and RFB0810

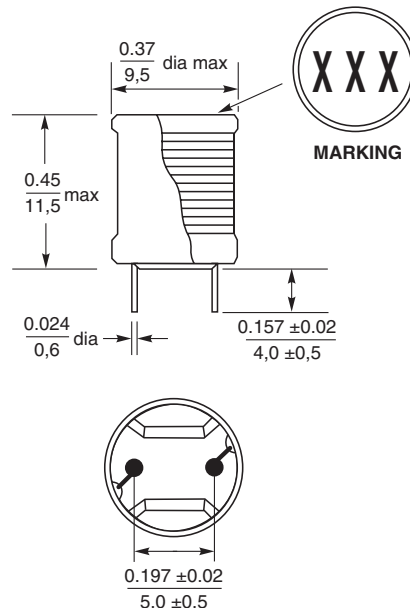
**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787\_PCB\_Washing.pdf

## RFB0807



Weight: 1.22 – 1.46 g

## RFB0810



Weight: 1.97 – 2.25 g

## RFB1010



Weight: 3.04 – 3.32 g



# Power Inductors – RFB0807 Series

| Part number <sup>1</sup> | Inductance <sup>2</sup> | DCR max (Ohms) | SRF typ <sup>3</sup> (MHz) | Isat <sup>4</sup> (A) | Irms (A) <sup>5</sup> |           |
|--------------------------|-------------------------|----------------|----------------------------|-----------------------|-----------------------|-----------|
|                          |                         |                |                            |                       | 20°C rise             | 40°C rise |
| RFB0807-1R0L             | 0.9 $\mu$ H $\pm$ 20%   | 0.008          | 180                        | 10.0                  | 6.00                  | 8.50      |
| RFB0807-2R2L             | 2.2 $\mu$ H $\pm$ 20%   | 0.012          | 80                         | 6.00                  | 5.00                  | 7.50      |
| RFB0807-2R7L             | 2.7 $\mu$ H $\pm$ 20%   | 0.014          | 40                         | 5.50                  | 4.60                  | 6.54      |
| RFB0807-3R3L             | 3.3 $\mu$ H $\pm$ 20%   | 0.017          | 40                         | 5.00                  | 4.20                  | 5.97      |
| RFB0807-3R9L             | 3.9 $\mu$ H $\pm$ 20%   | 0.020          | 40                         | 4.50                  | 3.70                  | 5.26      |
| RFB0807-4R7L             | 4.7 $\mu$ H $\pm$ 20%   | 0.024          | 40                         | 4.20                  | 3.50                  | 4.98      |
| RFB0807-5R6L             | 5.6 $\mu$ H $\pm$ 20%   | 0.028          | 40                         | 4.00                  | 3.40                  | 4.83      |
| RFB0807-6R8L             | 6.8 $\mu$ H $\pm$ 20%   | 0.033          | 30                         | 3.60                  | 3.20                  | 4.55      |
| RFB0807-8R2L             | 8.2 $\mu$ H $\pm$ 20%   | 0.035          | 30                         | 3.30                  | 3.00                  | 4.27      |
| RFB0807-100L             | 10 $\mu$ H $\pm$ 10%    | 0.040          | 30                         | 3.10                  | 3.00                  | 4.20      |
| RFB0807-120L             | 12 $\mu$ H $\pm$ 10%    | 0.050          | 30                         | 2.80                  | 2.50                  | 3.56      |
| RFB0807-150L             | 15 $\mu$ H $\pm$ 10%    | 0.065          | 25                         | 2.50                  | 2.25                  | 3.20      |
| RFB0807-180L             | 18 $\mu$ H $\pm$ 10%    | 0.078          | 20                         | 2.30                  | 2.07                  | 2.94      |
| RFB0807-220L             | 22 $\mu$ H $\pm$ 10%    | 0.100          | 20                         | 2.10                  | 1.90                  | 2.70      |
| RFB0807-270L             | 27 $\mu$ H $\pm$ 10%    | 0.110          | 17                         | 1.90                  | 1.70                  | 2.42      |
| RFB0807-330L             | 33 $\mu$ H $\pm$ 10%    | 0.120          | 15                         | 1.70                  | 1.50                  | 2.13      |
| RFB0807-390L             | 39 $\mu$ H $\pm$ 10%    | 0.160          | 13                         | 1.60                  | 1.45                  | 2.06      |
| RFB0807-470L             | 47 $\mu$ H $\pm$ 10%    | 0.190          | 12                         | 1.45                  | 1.30                  | 1.85      |
| RFB0807-560L             | 56 $\mu$ H $\pm$ 10%    | 0.210          | 11                         | 1.30                  | 1.20                  | 1.71      |
| RFB0807-680L             | 68 $\mu$ H $\pm$ 10%    | 0.280          | 10                         | 1.20                  | 1.10                  | 1.56      |
| RFB0807-820L             | 82 $\mu$ H $\pm$ 10%    | 0.330          | 9                          | 1.10                  | 1.00                  | 1.42      |
| RFB0807-101L             | 100 $\mu$ H $\pm$ 10%   | 0.400          | 8                          | 1.00                  | 0.90                  | 1.30      |
| RFB0807-121L             | 120 $\mu$ H $\pm$ 10%   | 0.450          | 7                          | 0.90                  | 0.80                  | 1.14      |
| RFB0807-151L             | 150 $\mu$ H $\pm$ 10%   | 0.510          | 6                          | 0.80                  | 0.72                  | 1.02      |
| RFB0807-181L             | 180 $\mu$ H $\pm$ 10%   | 0.700          | 5                          | 0.70                  | 0.63                  | 0.90      |
| RFB0807-221L             | 220 $\mu$ H $\pm$ 10%   | 0.800          | 5                          | 0.65                  | 0.60                  | 0.85      |
| RFB0807-271L             | 270 $\mu$ H $\pm$ 10%   | 0.900          | 4.5                        | 0.60                  | 0.55                  | 0.78      |
| RFB0807-331L             | 330 $\mu$ H $\pm$ 10%   | 1.16           | 4.5                        | 0.55                  | 0.50                  | 0.71      |
| RFB0807-391L             | 390 $\mu$ H $\pm$ 10%   | 1.31           | 3.5                        | 0.45                  | 0.40                  | 0.57      |
| RFB0807-471L             | 470 $\mu$ H $\pm$ 10%   | 1.75           | 2.9                        | 0.40                  | 0.36                  | 0.51      |
| RFB0807-561L             | 560 $\mu$ H $\pm$ 10%   | 1.95           | 2.7                        | 0.38                  | 0.35                  | 0.50      |
| RFB0807-681L             | 680 $\mu$ H $\pm$ 10%   | 2.20           | 2.6                        | 0.35                  | 0.31                  | 0.44      |
| RFB0807-821L             | 820 $\mu$ H $\pm$ 10%   | 3.00           | 2.6                        | 0.32                  | 0.29                  | 0.41      |
| RFB0807-102L             | 1.0 mH $\pm$ 10%        | 3.40           | 2.6                        | 0.30                  | 0.25                  | 0.40      |
| RFB0807-122L             | 1.2 mH $\pm$ 10%        | 4.50           | 2.3                        | 0.28                  | 0.24                  | 0.34      |
| RFB0807-152L             | 1.5 mH $\pm$ 10%        | 5.20           | 2.1                        | 0.25                  | 0.21                  | 0.30      |
| RFB0807-182L             | 1.8 mH $\pm$ 10%        | 5.80           | 1.8                        | 0.22                  | 0.20                  | 0.28      |
| RFB0807-222L             | 2.2 mH $\pm$ 10%        | 8.00           | 1.5                        | 0.20                  | 0.18                  | 0.26      |
| RFB0807-272L             | 2.7 mH $\pm$ 10%        | 8.90           | 1.2                        | 0.18                  | 0.17                  | 0.24      |
| RFB0807-332L             | 3.3 mH $\pm$ 10%        | 11.8           | 1.1                        | 0.15                  | 0.14                  | 0.19      |
| RFB0807-392L             | 3.9 mH $\pm$ 10%        | 13.1           | 1.0                        | 0.12                  | 0.11                  | 0.16      |
| RFB0807-472L             | 4.7 mH $\pm$ 10%        | 17.6           | 1.0                        | 0.10                  | 0.10                  | 0.15      |
| RFB0807-562L             | 5.6 mH $\pm$ 10%        | 19.6           | 0.9                        | 0.10                  | 0.10                  | 0.15      |
| RFB0807-682L             | 6.8 mH $\pm$ 10%        | 27             | 0.8                        | 0.10                  | 0.10                  | 0.14      |
| RFB0807-822L             | 8.2 mH $\pm$ 10%        | 30             | 0.7                        | 0.10                  | 0.10                  | 0.14      |
| RFB0807-103L             | 10 mH $\pm$ 10%         | 34             | 0.7                        | 0.10                  | 0.10                  | 0.13      |
| RFB0807-123L             | 12 mH $\pm$ 10%         | 46             | 0.6                        | 0.08                  | 0.10                  | 0.13      |
| RFB0807-153L             | 15 mH $\pm$ 10%         | 53             | 0.5                        | 0.06                  | 0.08                  | 0.11      |
| RFB0807-183L             | 18 mH $\pm$ 10%         | 56             | 0.5                        | 0.05                  | 0.08                  | 0.10      |

## Typical L vs Current



## Typical L vs Frequency



1. When ordering, please specify **termination** code:

**RFB0807-183L**

**Termination: L** = Tin-silver over tin over copper over steel.

**Special order: T** = RoHS tin-silver-copper (95.5/4/0.5)

or **S** = non-RoHS tin-lead (63/37).

To order parts packaged in fanfold tape (800 parts per box), add the letter "F" at the end of the part number.

- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR-meter or equivalent.
- SRF measured using Agilent/HP 4191A or equivalent.
- DC current at which the inductance drops 10% (typ) from its value without current.
- Current that causes the specified temperature rise from 25°C ambient.
- Electrical specifications at 25°C.



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# Power Inductors – RFB0810 Series

| Part number <sup>1</sup> | Inductance <sup>2</sup><br>±10% | DCR<br>max<br>(Ohms) | SRF<br>typ <sup>3</sup><br>(MHz) | Isat <sup>4</sup><br>(A) | Irms(A) <sup>5</sup> |              |
|--------------------------|---------------------------------|----------------------|----------------------------------|--------------------------|----------------------|--------------|
|                          |                                 |                      |                                  |                          | 20°C<br>rise         | 40°C<br>rise |
| RFB0810-100L             | 10 µH                           | 0.030                | 22                               | 4.20                     | 4.00                 | 5.30         |
| RFB0810-120L             | 12 µH                           | 0.035                | 20                               | 3.90                     | 3.75                 | 5.10         |
| RFB0810-150L             | 15 µH                           | 0.040                | 17                               | 3.60                     | 3.52                 | 4.80         |
| RFB0810-180L             | 18 µH                           | 0.040                | 15                               | 3.30                     | 3.30                 | 4.50         |
| RFB0810-220L             | 22 µH                           | 0.050                | 12                               | 2.90                     | 3.20                 | 4.20         |
| RFB0810-270L             | 27 µH                           | 0.055                | 12                               | 2.60                     | 2.87                 | 3.90         |
| RFB0810-330L             | 33 µH                           | 0.075                | 11                               | 2.40                     | 2.65                 | 3.60         |
| RFB0810-390L             | 39 µH                           | 0.085                | 10.3                             | 2.20                     | 2.44                 | 3.30         |
| RFB0810-470L             | 47 µH                           | 0.100                | 9.5                              | 2.00                     | 2.22                 | 3.00         |
| RFB0810-560L             | 56 µH                           | 0.120                | 8.6                              | 1.80                     | 2.00                 | 2.70         |
| RFB0810-680L             | 68 µH                           | 0.150                | 7.5                              | 1.60                     | 1.77                 | 2.40         |
| RFB0810-820L             | 82 µH                           | 0.190                | 6.6                              | 1.50                     | 1.54                 | 2.10         |
| RFB0810-101L             | 100 µH                          | 0.200                | 5.5                              | 1.40                     | 1.30                 | 1.80         |
| RFB0810-121L             | 120 µH                          | 0.240                | 5.3                              | 1.20                     | 1.22                 | 1.70         |
| RFB0810-151L             | 150 µH                          | 0.340                | 4.5                              | 1.10                     | 1.14                 | 1.60         |
| RFB0810-181L             | 180 µH                          | 0.360                | 4.4                              | 1.00                     | 1.06                 | 1.50         |
| RFB0810-221L             | 220 µH                          | 0.480                | 4.4                              | 0.92                     | 0.98                 | 1.40         |
| RFB0810-271L             | 270 µH                          | 0.550                | 4.0                              | 0.84                     | 0.90                 | 1.30         |
| RFB0810-331L             | 330 µH                          | 0.650                | 3.5                              | 0.75                     | 0.82                 | 1.10         |
| RFB0810-391L             | 390 µH                          | 0.850                | 3.0                              | 0.70                     | 0.85                 | 1.00         |
| RFB0810-471L             | 470 µH                          | 1.00                 | 2.5                              | 0.63                     | 0.67                 | 0.90         |
| RFB0810-561L             | 560 µH                          | 1.10                 | 2.3                              | 0.58                     | 0.59                 | 0.80         |
| RFB0810-681L             | 680 µH                          | 1.40                 | 2.0                              | 0.52                     | 0.51                 | 0.70         |
| RFB0810-821L             | 820 µH                          | 1.90                 | 2.0                              | 0.48                     | 0.43                 | 0.60         |
| RFB0810-102L             | 1.0 mH                          | 2.20                 | 2.0                              | 0.43                     | 0.35                 | 0.50         |
| RFB0810-122L             | 1.2 mH                          | 2.80                 | 1.6                              | 0.40                     | 0.33                 | 0.47         |
| RFB0810-152L             | 1.5 mH                          | 3.20                 | 1.3                              | 0.35                     | 0.31                 | 0.45         |
| RFB0810-182L             | 1.8 mH                          | 3.60                 | 1.3                              | 0.32                     | 0.29                 | 0.42         |
| RFB0810-222L             | 2.2 mH                          | 4.80                 | 1.3                              | 0.29                     | 0.27                 | 0.39         |
| RFB0810-272L             | 2.7 mH                          | 5.60                 | 1.2                              | 0.26                     | 0.25                 | 0.36         |
| RFB0810-332L             | 3.3 mH                          | 7.60                 | 1.0                              | 0.24                     | 0.23                 | 0.33         |
| RFB0810-392L             | 3.9 mH                          | 8.90                 | 0.9                              | 0.22                     | 0.21                 | 0.31         |
| RFB0810-472L             | 4.7 mH                          | 9.60                 | 0.9                              | 0.20                     | 0.20                 | 0.28         |
| RFB0810-562L             | 5.6 mH                          | 12.0                 | 0.8                              | 0.18                     | 0.18                 | 0.25         |
| RFB0810-682L             | 6.8 mH                          | 14.0                 | 0.7                              | 0.16                     | 0.16                 | 0.23         |
| RFB0810-822L             | 8.2 mH                          | 17.5                 | 0.6                              | 0.15                     | 0.14                 | 0.20         |
| RFB0810-103L             | 10 mH                           | 21                   | 0.6                              | 0.13                     | 0.12                 | 0.17         |
| RFB0810-123L             | 12 mH                           | 28                   | 0.5                              | 0.12                     | 0.11                 | 0.15         |
| RFB0810-153L             | 15 mH                           | 32                   | 0.5                              | 0.11                     | 0.10                 | 0.14         |
| RFB0810-183L             | 18 mH                           | 36                   | 0.4                              | 0.10                     | 0.09                 | 0.12         |

1. When ordering, please specify **termination** code:

**RFB0810-183L**

**Termination: L** = Tin-silver over tin over copper over steel.

**Special order: T** = RoHS tin-silver-copper (95.5/4/0.5)  
or **S** = non-RoHS tin-lead (63/37).

To order parts packaged in fanfold tape (800 parts per box), add the letter "F" at the end of the part number.

- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR-meter or equivalent.
- SRF measured using Agilent/HP 4191A or equivalent.
- DC current at which the inductance drops 10% (typ) from its value without current.
- Current that causes the specified temperature rise from 25°C ambient.
- Electrical specifications at 25°C.

## Typical L vs Current



## Typical L vs Frequency





# Power Inductors – RFB1010 Series

| Part number <sup>1</sup> | Inductance <sup>2</sup><br>±10% | DCR<br>max<br>(Ohms) | SRF<br>typ <sup>3</sup><br>(MHz) | Isat <sup>4</sup><br>(A) | Irms(A) <sup>5</sup> |              |
|--------------------------|---------------------------------|----------------------|----------------------------------|--------------------------|----------------------|--------------|
|                          |                                 |                      |                                  |                          | 20°C<br>rise         | 40°C<br>rise |
| RFB1010-100L             | 10 µH                           | 0.023                | 23                               | 6.10                     | 4.20                 | 6.00         |
| RFB1010-120L             | 12 µH                           | 0.025                | 20                               | 5.60                     | 4.00                 | 5.70         |
| RFB1010-150L             | 15 µH                           | 0.028                | 19                               | 5.00                     | 3.75                 | 5.40         |
| RFB1010-180L             | 18 µH                           | 0.030                | 16                               | 4.60                     | 3.50                 | 5.00         |
| RFB1010-220L             | 22 µH                           | 0.042                | 15                               | 4.10                     | 3.30                 | 4.70         |
| RFB1010-270L             | 27 µH                           | 0.046                | 12                               | 3.70                     | 3.00                 | 4.40         |
| RFB1010-330L             | 33 µH                           | 0.055                | 11                               | 3.40                     | 2.80                 | 4.10         |
| RFB1010-390L             | 39 µH                           | 0.075                | 10.3                             | 3.10                     | 2.60                 | 3.80         |
| RFB1010-470L             | 47 µH                           | 0.082                | 9.5                              | 2.80                     | 2.40                 | 3.50         |
| RFB1010-560L             | 56 µH                           | 0.090                | 8.6                              | 2.60                     | 2.20                 | 3.20         |
| RFB1010-680L             | 68 µH                           | 0.120                | 7.5                              | 2.30                     | 2.00                 | 2.80         |
| RFB1010-820L             | 82 µH                           | 0.140                | 7.0                              | 2.10                     | 1.90                 | 2.50         |
| RFB1010-101L             | 100 µH                          | 0.150                | 7.0                              | 1.90                     | 1.70                 | 2.20         |
| RFB1010-121L             | 120 µH                          | 0.210                | 6.0                              | 1.75                     | 1.60                 | 2.10         |
| RFB1010-151L             | 150 µH                          | 0.245                | 5.0                              | 1.60                     | 1.50                 | 1.90         |
| RFB1010-181L             | 180 µH                          | 0.30                 | 5.0                              | 1.45                     | 1.40                 | 1.80         |
| RFB1010-221L             | 220 µH                          | 0.36                 | 4.3                              | 1.30                     | 1.30                 | 1.70         |
| RFB1010-271L             | 270 µH                          | 0.49                 | 4.0                              | 1.20                     | 1.20                 | 1.60         |
| RFB1010-331L             | 330 µH                          | 0.57                 | 3.5                              | 1.10                     | 1.00                 | 1.40         |
| RFB1010-391L             | 390 µH                          | 0.62                 | 3.0                              | 1.00                     | 0.90                 | 1.30         |
| RFB1010-471L             | 470 µH                          | 0.81                 | 3.0                              | 0.90                     | 0.80                 | 1.20         |
| RFB1010-561L             | 560 µH                          | 0.92                 | 2.3                              | 0.80                     | 0.70                 | 1.05         |
| RFB1010-681L             | 680 µH                          | 1.20                 | 2.0                              | 0.75                     | 0.60                 | 0.93         |
| RFB1010-821L             | 820 µH                          | 1.35                 | 2.0                              | 0.68                     | 0.55                 | 0.80         |
| RFB1010-102L             | 1.0 mH                          | 1.45                 | 2.0                              | 0.60                     | 0.50                 | 0.67         |
| RFB1010-122L             | 1.2 mH                          | 2.10                 | 1.6                              | 0.55                     | 0.47                 | 0.63         |
| RFB1010-152L             | 1.5 mH                          | 2.40                 | 1.4                              | 0.50                     | 0.44                 | 0.59         |
| RFB1010-182L             | 1.8 mH                          | 3.50                 | 1.3                              | 0.45                     | 0.41                 | 0.55         |
| RFB1010-222L             | 2.2 mH                          | 4.10                 | 1.3                              | 0.41                     | 0.38                 | 0.50         |
| RFB1010-272L             | 2.7 mH                          | 5.20                 | 1.2                              | 0.37                     | 0.35                 | 0.47         |
| RFB1010-332L             | 3.3 mH                          | 6.00                 | 1.0                              | 0.34                     | 0.32                 | 0.43         |
| RFB1010-392L             | 3.9 mH                          | 7.00                 | 0.9                              | 0.31                     | 0.29                 | 0.39         |
| RFB1010-472L             | 4.7 mH                          | 8.50                 | 0.8                              | 0.28                     | 0.25                 | 0.35         |
| RFB1010-562L             | 5.6 mH                          | 10.0                 | 0.8                              | 0.26                     | 0.23                 | 0.30         |
| RFB1010-682L             | 6.8 mH                          | 13.0                 | 0.7                              | 0.23                     | 0.19                 | 0.26         |
| RFB1010-822L             | 8.2 mH                          | 15.8                 | 0.6                              | 0.21                     | 0.16                 | 0.22         |
| RFB1010-103L             | 10 mH                           | 19                   | 0.6                              | 0.19                     | 0.13                 | 0.18         |
| RFB1010-123L             | 12 mH                           | 22                   | 0.5                              | 0.17                     | 0.12                 | 0.17         |
| RFB1010-153L             | 15 mH                           | 29                   | 0.5                              | 0.16                     | 0.11                 | 0.15         |
| RFB1010-183L             | 18 mH                           | 33                   | 0.4                              | 0.14                     | 0.10                 | 0.13         |

1. When ordering, please specify **termination** code:

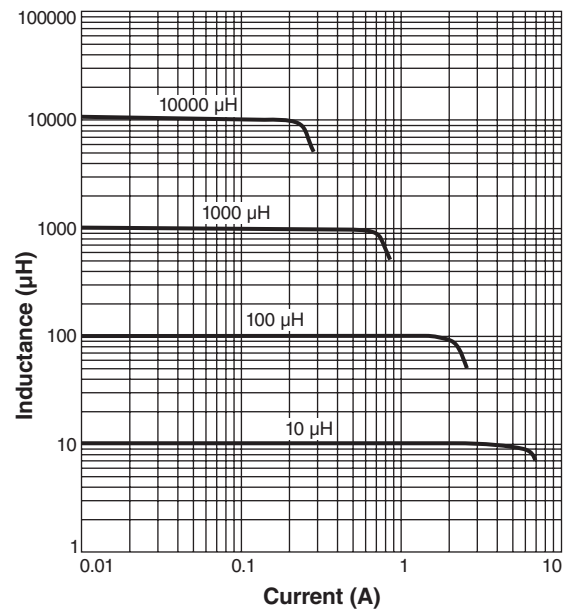
**RFB1010-183L**

**Termination: L** = Tin-silver over tin over copper over steel.

**Special order: T** = RoHS tin-silver-copper (95.5/4/0.5)  
or **S** = non-RoHS tin-lead (63/37).

- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR-meter or equivalent.
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## Typical L vs Current



## Typical L vs Frequency

