

Leaded Power Inductors

Features

- The SL-series power inductors have low DC resistance and a large permissible DC current with high reliability.
- Magnetic shielded products are available for each series for consideration against radiation.
- The SL-series has high saturation magnetic-flux density and high efficiency



Applications

- For DC-DC converter, (Example: step-up or step-down)
- Suitable for use in power lines of:
 - Camcorder
 - LCD set
 - OA equipment
 - Notebook
 - Computer
 - PDA
 - Small size communication equipment

Part Number Systems

SL - 0406 - 1R0 - M - U - LF

(1) (2) (3) (4) (5) (6)

| | | | |
|-----|------------------------------|-----|---------------------------------------------------------|
| (1) | Product series | (2) | Size |
| (3) | Inductance Value: 1R0 = 1 uH | (4) | Inductance Tolerance: M = ± 20%, L = ±15%, K = ± 10% |
| (5) | U = UL tube | | |
| (6) | ROHs Compliant | | |

Leaded Power Inductors

Shape And Dimensions

| TYPE | DIMENSIONS (MM) | |
|--------------------------------------------------|-----------------|--|
| SL-0406 ($1\mu\text{H}\sim 1.0\text{mH}$) | | |
| SL-0608 ($1\mu\text{H}\sim 1.0\text{mH}$) | | |
| SL-0810 ($100\mu\text{H}\sim 1.0\text{mH}$) | | |
| SL-0912 ($100\mu\text{H}\sim 1.0\text{mH}$) | | |
| SL-1216 ($10\mu\text{H}\sim 1.0\text{mH}$) | | |
| SL-1415 ($10\mu\text{H}\sim 1.0\text{mH}$) | | |
| SL-1618 ($22\mu\text{H}\sim 1.0\text{mH}$) | | |

Leaded Power Inductors

| SL-XXXX-Series | | | ELECTRICAL CHARACTERISTICS | | | | | | | | | | | | | | | | |
|----------------|-----------------|-----------|----------------------------|-------|------|-------|-------|-------|-------|------|---------------------------------|------|------|------|------|------|------|-----|------|
| Dash No. | Inductance (uH) | Test Freq | Dc Resistance (W) Max. | | | | | | | | Permissible DC Current (A) Max. | | | | | | | | |
| | | | Size | | | | | | | | Size | | | | | | | | |
| | | | 0406 | 0608 | 0810 | 0912 | 1216 | 1415 | 1618 | 0406 | 0608 | 0810 | 0912 | 1216 | 1415 | 1618 | | | |
| 1R0 | 1.0 | 7.96MHz | 0.021 | 0.024 | | | | | | | | 4.50 | 2.10 | | | | | | |
| 1R2 | 1.2 | | 0.030 | 0.027 | | | | | | | | | 4.00 | 2.05 | | | | | |
| 1R5 | 1.5 | | 0.034 | 0.030 | | | | | | | | | 3.60 | 2.00 | | | | | |
| 1R8 | 1.8 | | 0.037 | 0.032 | | | | | | | | | 3.30 | 1.95 | | | | | |
| 2R2 | 2.2 | | 0.040 | 0.035 | | | | | | | | | 3.00 | 1.90 | | | | | |
| 2R7 | 2.7 | | 0.045 | 0.042 | | | | | | | | | 2.70 | 1.85 | | | | | |
| 3R3 | 3.3 | | 0.058 | 0.049 | | | | | | | | | 2.50 | 1.80 | | | | | |
| 3R9 | 3.9 | | 0.066 | 0.056 | | | | | | | | | 2.30 | 1.75 | | | | | |
| 4R7 | 4.7 | | 0.072 | 0.061 | | | | | | | | | 2.20 | 1.70 | | | | | |
| 5R6 | 5.6 | | 0.081 | 0.089 | | | | | | | | | 2.00 | 1.65 | | | | | |
| 6R8 | 6.8 | | 0.087 | 0.092 | | | | | | | | | 1.80 | 1.60 | | | | | |
| 8R2 | 8.2 | | 0.108 | 0.10 | | | | | | | | | 1.60 | 1.55 | | | | | |
| 100 | 10 | 2.52MHz | 0.124 | 0.13 | | | 0.015 | 0.017 | | | | 1.50 | 1.50 | | | 4.20 | 14 | | |
| 120 | 12 | | 0.160 | 0.16 | | | | | | | | | 1.30 | 1.35 | | | | | |
| 150 | 15 | | 0.187 | 0.19 | | | 0.020 | 0.021 | | | | | 1.20 | 1.30 | | | 3.30 | 10 | |
| 180 | 18 | | 0.219 | 0.25 | | | 0.022 | | | | | | 1.10 | 1.25 | | | 3.30 | | |
| 220 | 22 | | 0.295 | 0.30 | | | 0.025 | 0.026 | 0.031 | | | | 1.00 | 1.15 | | | 3.00 | 8.8 | 14.0 |
| 270 | 27 | | 0.330 | 0.40 | | | 0.027 | 0.028 | 0.035 | | | | 0.90 | 1.10 | | | 2.50 | 8.3 | 13.5 |
| 330 | 33 | | 0.375 | 0.55 | | | 0.030 | 0.031 | 0.037 | | | | 0.85 | 1.05 | | | 2.30 | 7.8 | 13.0 |
| 390 | 39 | | 0.460 | 0.59 | | | 0.032 | 0.035 | 0.052 | | | | 0.80 | 1.00 | | | 2.10 | 7.3 | 12.5 |
| 470 | 47 | | 0.540 | 0.61 | | | 0.035 | 0.046 | 0.056 | | | | 0.70 | 0.95 | | | 2.00 | 6.7 | 11.5 |
| 560 | 56 | | 0.664 | 0.63 | | | 0.040 | 0.051 | 0.058 | | | | 0.60 | 0.90 | | | 1.80 | 6.2 | 11.0 |
| 680 | 68 | | 0.819 | 0.65 | | | 0.055 | 0.055 | 0.062 | | | | 0.55 | 0.83 | | | 1.70 | 5.7 | 9.2 |
| 820 | 82 | | 1.431 | 0.68 | | | 0.060 | 0.058 | 0.076 | | | | 0.50 | 0.78 | | | 1.60 | 5.2 | 8.7 |
| 101 | 100 | 1KHz | 0.105 | 0.74 | 0.26 | 0.135 | 0.086 | 0.075 | 0.108 | | | 0.46 | 0.70 | 1.40 | 1.70 | 1.40 | 4.6 | 7.7 | |
| 121 | 120 | | 1.515 | 0.76 | 0.31 | 0.175 | 0.093 | 0.100 | 0.132 | | | 0.41 | 0.62 | 1.30 | 1.50 | 1.20 | 4.2 | 7.0 | |
| 151 | 150 | | 1.770 | 0.80 | 0.38 | 0.200 | 0.100 | 0.125 | 0.152 | | | 0.37 | 0.57 | 1.10 | 1.40 | 1.00 | 3.7 | 6.5 | |
| 181 | 180 | | 1.725 | 0.85 | 0.44 | 0.227 | 0.115 | 0.141 | 0.163 | | | 0.35 | 0.53 | 1.00 | 1.30 | 0.90 | 3.5 | 6.0 | |
| 221 | 220 | | 1.753 | 0.89 | 0.50 | 1.316 | 0.145 | 0.208 | 0.216 | | | 0.32 | 0.49 | 0.90 | 1.10 | 0.90 | 3.0 | 5.5 | |
| 271 | 270 | | 3.036 | 1.01 | 0.60 | 0.366 | 0.166 | 0.240 | 0.253 | | | 0.28 | 0.45 | 0.83 | 1.00 | 0.79 | 2.7 | 5.0 | |
| 331 | 330 | | 3.432 | 1.08 | 0.78 | 0.467 | 0.190 | 0.272 | 0.270 | | | 0.25 | 0.41 | 0.78 | 0.93 | 0.74 | 2.5 | 4.4 | |

* All specifications are subjected to change without prior notice

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| SL-XXXX-Series | | | ELECTRICAL CHARACTERISTICS | | | | | | | | | | | | | | |
|----------------|-----------------|-----------|----------------------------|------|------|-------|-------|-------|-------|------|---------------------------------|------|------|------|------|------|--|
| Dash No. | Inductance (uH) | Test Freq | Dc Resistance (W) Max. | | | | | | | | Permissible DC Current (A) Max. | | | | | | |
| | | | Size | | | | | | | | Size | | | | | | |
| | | | 0406 | 0608 | 0810 | 0912 | 1216 | 1415 | 1618 | 0406 | 0608 | 0810 | 0912 | 1216 | 1415 | 1618 | |
| 391 | 390 | 1KHz | 3.864 | 1.32 | 0.85 | 0.532 | 0.241 | 0.303 | 0.341 | 0.23 | 0.37 | 0.70 | 0.86 | 0.69 | 2.3 | 3.9 | |
| 471 | 470 | | 4.368 | 1.45 | 1.08 | 0.656 | 0.311 | 0.342 | 0.390 | 0.2 | 0.32 | 0.63 | 0.78 | 0.58 | 2.1 | 3.6 | |
| 561 | 560 | | 5.664 | 1.60 | 1.19 | 0.741 | 0.352 | 0.531 | 0.425 | 0.2 | 0.29 | 0.60 | 0.71 | 0.54 | 1.8 | 3.3 | |
| 681 | 680 | | 6.480 | 1.85 | 1.59 | 0.917 | 0.405 | 0.590 | 0.565 | 0.18 | 0.26 | 0.55 | 0.65 | 0.52 | 1.7 | 2.9 | |
| 821 | 820 | | 7.296 | 2.00 | 1.88 | 1.195 | 0.530 | 0.728 | 0.700 | 0.16 | 0.22 | 0.50 | 0.59 | 0.47 | 1.5 | 2.7 | |
| 102 | 1000 | | 10.20 | 2.30 | 2.30 | 1.362 | 0.606 | 0.750 | 0.881 | 0.14 | 0.20 | 0.45 | 0.53 | 0.45 | 1.4 | 2.5 | |

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- ❖ Tolerance of Inductance: 1.0 ~ 8.2 uH = ± 20% (M)
1000 ~ 10,000 uH = ± 10% (K)
- ❖ The maximum permissible DC current is the DC current applied which causes 10% reduction of its initial inductance value, or the coil temperature to rise by 40°C (Ta = 20°C), whichever is lower.