

NATIONAL SEMICONDUCTOR SIMPLE SWITCHER APPLICATIONS

DESCRIPTION

- High Current Chokes

ENVIRONMENTAL DATA

- Storage temperature range: -55°C to +130°C
- Operating temperature range: -40°C to +130°C

PACKAGING INFORMATION

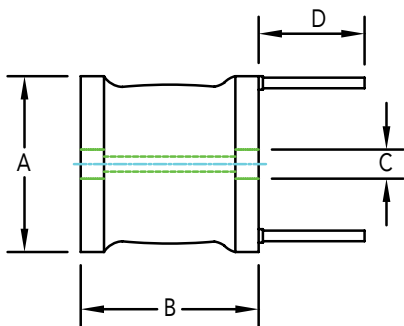
- Contact Customer Support 800.645.5828

FEATURES & APPLICATIONS

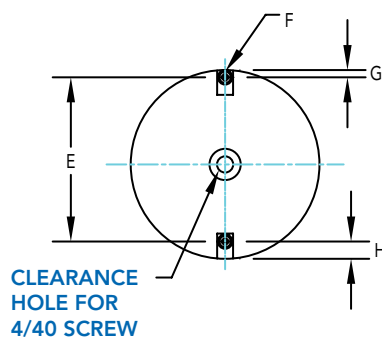
- Uses high saturation flux density material ideal for use in switching regulated power supplies and small-sized current chokes
- Inductance ranges from 47µH to 2200 µH with DC saturation currents up to 20 A

Verify operation with sample in actual circuit. Order samples at www.rencousa.com.

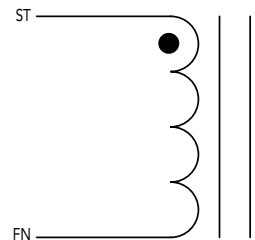
FRONT VIEW



SIDE VIEW



SCHEMATIC



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MECHANICAL DIMENSIONS

U.S. Standard (mm)

| PART NUMBER | A (MAX.) | B (MAX.) | C (REF.) | D (MIN.) | PART WEIGHT |
|-------------|---------------|---------------|--------------|------------|------------------|
| RL-1954 | 0.825 (20.96) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | 27.0g (0.95oz) |
| RL-1956 | 0.825 (20.96) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | 23.9g (0.84oz) |
| RL-1957 | 1.100 (27.94) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | 43.8g (1.54oz) |
| RL-1958 | 0.825 (20.96) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | 21.2g (0.74oz) |
| RL-1959 | 0.825 (20.96) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | 24.6g (0.87oz) |
| RL-1960 | 0.825 (20.96) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | 28.6g (1.00oz) |
| RL-1961 | 1.100 (27.94) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | 46.8g (1.65oz) |
| RL-1962 | 1.100 (27.94) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | 44.1g (1.56oz) |
| RL-1963 | 1.100 (27.94) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | 42.5g (1.50oz) |
| RL-1964 | 1.600 (40.64) | 1.100 (27.94) | 0.290 (7.37) | 0.5 (12.7) | 110.1g (3.90oz) |
| RL-1965 | 1.600 (40.64) | 1.100 (27.94) | 0.290 (7.37) | 0.5 (12.7) | 111.2g (3.92oz) |
| RL-2442 | 0.825 (20.96) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | 22.1.0g (0.78oz) |
| RL-2443 | 0.825 (20.96) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | 25.4g (0.90oz) |
| RL-2444 | 0.825 (20.96) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | 24.4g (0.86oz) |
| RL-2445 | 0.825 (20.96) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | 26.5g (0.93oz) |
| RL-2446 | 1.100 (27.94) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | 43.4g (1.53oz) |
| RL-2447 | 1.100 (27.94) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | 47.5g (1.65oz) |
| RL-2448 | 0.825 (20.96) | 0.850 (21.59) | 0.195 (4.95) | 0.5 (12.7) | contact factory |

U.S. Standard (mm)

| PART NUMBER | E | F | G | H |
|-------------|---------------|---------------|--------------|-------------|
| RL-1954 | 0.593 (15.06) | 0.032 (0.813) | 0.015 (0.38) | 0.05 (1.27) |
| RL-1956 | 0.656 (16.66) | 0.036 (0.914) | 0.015 (0.38) | 0.05 (1.27) |
| RL-1957 | 0.750 (19.05) | 0.052 (1.320) | 0.015 (0.38) | 0.05 (1.27) |
| RL-1958 | 0.590 (14.97) | 0.016 (0.406) | 0.015 (0.38) | 0.05 (1.27) |
| RL-1959 | 0.590 (14.97) | 0.018 (0.457) | 0.015 (0.38) | 0.05 (1.27) |
| RL-1960 | 0.590 (14.97) | 0.023 (0.584) | 0.015 (0.38) | 0.05 (1.27) |
| RL-1961 | 0.750 (19.05) | 0.032 (0.813) | 0.015 (0.38) | 0.05 (1.27) |
| RL-1962 | 0.812 (20.62) | 0.036 (0.914) | 0.015 (0.38) | 0.05 (1.27) |
| RL-1963 | 0.781 (19.84) | 0.042 (1.830) | 0.015 (0.38) | 0.05 (1.27) |
| RL-1964 | 1.125 (28.59) | 0.058 (1.470) | 0.015 (0.38) | 0.05 (1.27) |
| RL-1965 | 1.140 (28.97) | 0.065 (1.650) | 0.015 (0.38) | 0.05 (1.27) |
| RL-2442 | 0.625 (15.88) | 0.042 (1.830) | 0.015 (0.38) | 0.05 (1.27) |
| RL-2443 | 0.656 (16.66) | 0.036 (0.914) | 0.015 (0.38) | 0.05 (1.27) |
| RL-2444 | 0.593 (15.06) | 0.032 (0.813) | 0.015 (0.38) | 0.05 (1.27) |
| RL-2445 | 0.593 (15.06) | 0.032 (0.813) | 0.015 (0.38) | 0.05 (1.27) |
| RL-2446 | 0.781 (19.84) | 0.042 (1.830) | 0.015 (0.38) | 0.05 (1.27) |
| RL-2447 | 0.812 (20.62) | 0.036 (0.914) | 0.015 (0.38) | 0.05 (1.27) |
| RL-2448 | 0.590 (14.97) | 0.016 (0.406) | 0.015 (0.38) | 0.05 (1.27) |



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NATIONAL SEMICONDUCTOR SIMPLE SWITCHER APPLICATIONS

| PART NUMBER | Inductance (μ H) \pm 10% | DCR Max. (Ohms) | Isat (A) | Irms (A) |
|-------------|------------------------------------|--------------------|-------------|-------------|
| RL-1954 | 150.0 | 0.098 | 8.6 | 4.0 |
| RL-1956 | 68.0 | 0.053 | 12.7 | 4.8 |
| RL-1957 | 47.0 | 0.024 | 18.1 | 9.0 |
| RL-1958 | 1500.0 | 1.260 | 2.4 | 0.8 |
| RL-1959 | 1000.0 | 0.818 | 3.1 | 1.0 |
| RL-1960 | 680.0 | 0.430 | 3.7 | 1.6 |
| RL-1961 | 470.0 | 0.187 | 6.0 | 4.0 |
| RL-1962 | 330.0 | 0.122 | 7.1 | 4.5 |
| RL-1963 | 220.0 | 0.080 | 8.7 | 5.5 |
| RL-1964 | 150.0 | 0.040 | 16.4 | 11.4 |
| RL-1965 | 100.0 | 0.025 | 20.0 | 14.4 |
| RL-2442 | 47.0 | 0.035 | 15.0 | 5.5 |
| RL-2443 | 68.0 | 0.053 | 12.7 | 4.8 |
| RL-2444 | 100.0 | 0.080 | 10.4 | 4.0 |
| RL-2445 | 150.0 | 0.098 | 8.6 | 4.0 |
| RL-2446 | 220.0 | 0.080 | 8.7 | 5.5 |
| RL-2447 | 330.0 | 0.122 | 7.1 | 4.5 |
| RL-2448 | 2200.0 | 1.540 | 2.0 | 0.8 |

NOTES:

1. ELECTRICAL SPECIFICATIONS
MEASURED AT 25°C
2. Isat - DC CURRENT THAT WILL CAUSE INDUCTANCE TO DROP BY 5%
3. Irms - CURRENT THAT CAUSES THE TEMPERATURE TO RISE APPROX. 40°C
ABOVE AMBIENT OF 25°C
4. INDUCTANCE TESTED AT 10 kHz, 0.1 Vrms

