

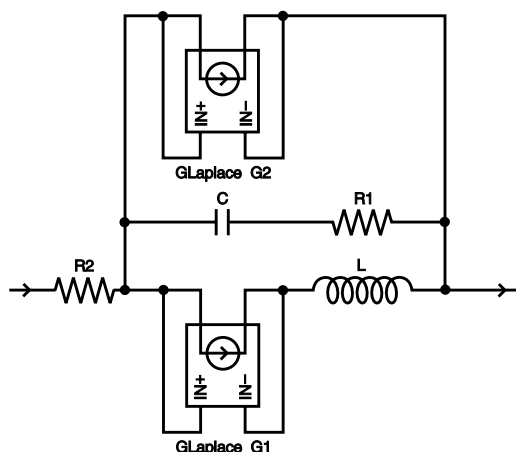
**NEW!**

# Modeling Coilcraft Power Inductors

This data allows you to create a model that adequately simulates the behavior of Coilcraft power inductors from DC to 100 kHz.

## PSPICE Equivalent of Circuit

An equivalent PSPICE model of our power inductors is illustrated in schematic form below.



The component values R1, R2, C, L, H1, H2 can be taken from the accompanying tables.

- GLaplace G1 is a model for the ac inductor resistance. The GLaplace statement defines a frequency dependent current which simulates the frequency dependent resistance. GLaplace G1 consists of the two equations:

$$\text{EXPR} = V(\% \text{ IN+}, \% \text{ IN-}) * H1$$

$$\text{XFORM} = \frac{1}{\sqrt{1 + S/2\pi}}$$

- GLaplace G2 is a model for the core losses in the power inductor as they vary with frequency. GLaplace G2 consists of the two equations:

$$\text{EXPR} = V(\% \text{ IN+}, \% \text{ IN-}) * H2$$

$$\text{XFORM} = \frac{1}{\sqrt{S/2\pi}}$$

## Using Other Simulation Software

- If your particular modeling program does not support the use of the Laplace transform, you may substitute the whole circuit above with the equation below, where f is frequency in Hertz. This equation can be used to obtain inductance and DCR characteristics, assuming the inductance does not change more than 2% of the nominal value.

$$Q \left( \frac{\text{img}}{\text{real}} \right) = a + bf + cf^2 + df^3$$

- The a, b, c, and d values may be taken from the accompanying tables.

Specifications subject to change without notice. Document 209-1 Revised 8/20/99

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# Modeling Coilcraft Power Inductors

## DO1606 Series

| Part number | R1 | R2   | C(nF) | L(μH) | k        | H1   | H2 | a        | b        | c        | d        |
|-------------|----|------|-------|-------|----------|------|----|----------|----------|----------|----------|
| DO1606-102  | 1  | 0.05 | 1     | 0.9   | 0.0003   | 1800 | 0  | 0.40927  | 2.2E-05  | 1.16E-10 | 8.84E-17 |
| DO1606-152  | 1  | 0.04 | 1     | 1.6   | 0.00008  | 8500 | 0  | 0.140957 | 0.000224 | -1.1E-09 | 4.7E-15  |
| DO1606-222  | 1  | 0.05 | 1     | 2     | 0.00008  | 8400 | 0  | 0.403851 | 0.00022  | -8.3E-10 | 2.63E-15 |
| DO1606-332  | 1  | 0.08 | 1     | 3.3   | 0.00009  | 7800 | 0  | 0.354167 | 0.000228 | -3E-10   | -2.2E-15 |
| DO1606-472  | 1  | 0.1  | 5     | 4.5   | 0.000115 | 6500 | 0  | 0.373503 | 0.000255 | -8.1E-10 | 1.43E-15 |
| DO1606-682  | 1  | 0.15 | 7     | 6.5   | 0.0002   | 3200 | 0  | 0.418588 | 0.000243 | -1.1E-09 | 4.55E-15 |
| DO1606-103  | 1  | 0.2  | 10    | 9     | 0.00031  | 2100 | 0  | 0.198199 | 0.000263 | -1.2E-09 | 2.82E-15 |
| DO1606-153  | 1  | 0.32 | 15    | 15    | 0.0004   | 1100 | 0  | 0.444653 | 0.000262 | -8.9E-10 | 4.05E-16 |
| DO1606-223  | 1  | 0.45 | 10    | 21    | 0.0004   | 1000 | 0  | 0.397351 | 0.000287 | -1E-09   | 1.22E-15 |
| DO1606-333  | 1  | 0.65 | 8     | 31    | 0.0006   | 700  | 0  | 0.397167 | 0.000307 | -1.4E-09 | 2.52E-15 |
| DO1606-473  | 1  | 0.88 | 5     | 45    | 0.0013   | 400  | 0  | 0.468141 | 0.000288 | -1.3E-09 | 3.33E-15 |
| DO1606-683  | 1  | 1.3  | 4     | 68    | 0.0016   | 300  | 0  | 0.367106 | 0.000306 | -1.9E-09 | 6.42E-15 |
| DO1606-104  | 1  | 1.8  | 2     | 100   | 0.003    | 180  | 0  | 0.538293 | 0.000287 | -1.3E-09 | 1.52E-15 |
| DO1606-154  | 1  | 2.3  | 2     | 140   | 0.0055   | 100  | 0  | 0.357474 | 0.000334 | -2.3E-09 | 9.11E-15 |
| DO1606-224  | 1  | 4.9  | 1     | 220   | 0.006    | 80   | 0  | 0.438071 | 0.00027  | -1.5E-09 | 5.33E-15 |
| DO1606-334  | 1  | 6.8  | 0.5   | 330   | 0.015    | 40   | 0  | 0.460652 | 0.000272 | -2E-09   | 7.58E-15 |
| DO1606-474  | 1  | 8.3  | 0.3   | 470   | 0.02     | 30   | 0  | 0.327939 | 0.000311 | -2.5E-09 | 1.15E-14 |
| DO1606-684  | 1  | 14   | 0.3   | 680   | 0.022    | 23   | 0  | 0.346557 | 0.000293 | -2E-09   | 8.85E-15 |
| DO1606-105  | 1  | 19   | 0.2   | 1000  | 0.032    | 16   | 0  | 0.399425 | 0.000283 | -1.2E-09 | 1.16E-15 |

## LPT1606 Series

| Part number | R1 | R2   | C(nF) | L(μH) | k       | H1   | H2 | a        | b        | c        | d        |
|-------------|----|------|-------|-------|---------|------|----|----------|----------|----------|----------|
| LPT1606-102 | 1  | 0.01 | 1     | 1     | 0.0004  | 1400 | 0  | 0.465025 | 2.86E-05 | 8.01E-10 | -6.3E-15 |
| LPT1606-152 | 1  | 0.05 | 1     | 1.6   | 0.00038 | 1600 | 0  | 0.009413 | 9.98E-05 | -2.8E-10 | -8.9E-16 |
| LPT1606-222 | 1  | 0.09 | 1     | 2.5   | 0.0004  | 1530 | 0  | 0.215686 | 0.000125 | -7.9E-10 | 2.79E-15 |
| LPT1606-332 | 1  | 0.13 | 1     | 3.7   | 0.0004  | 1525 | 0  | 0.196626 | 0.000163 | -1.4E-09 | 6.39E-15 |
| LPT1606-472 | 1  | 0.16 | 1     | 5.4   | 0.00052 | 1270 | 0  | 0.302153 | 0.000178 | -1.3E-09 | 5.55E-15 |
| LPT1606-682 | 1  | 0.22 | 1     | 7.7   | 0.00085 | 740  | 0  | 0.245166 | 0.000182 | -1.4E-09 | 5.03E-15 |
| LPT1606-103 | 1  | 0.3  | 1     | 11.7  | 0.0014  | 600  | 0  | 0.307572 | 0.000207 | -1.9E-09 | 7.59E-15 |
| LPT1606-153 | 1  | 0.45 | 15    | 17    | 0.0019  | 300  | 0  | 0.423858 | 0.000188 | -1.6E-09 | 5.33E-15 |
| LPT1606-223 | 1  | 0.55 | 10    | 24    | 0.0027  | 215  | 0  | 0.383358 | 0.0002   | -1.7E-09 | 5.93E-15 |

## LPO2506 Series

| Part number | R1 | R2   | C(nF) | L(μH) | k        | H1   | H2    | a        | b        | c         | d         |
|-------------|----|------|-------|-------|----------|------|-------|----------|----------|-----------|-----------|
| LPO2506-472 | 11 | 0.19 | 1     | 4.9   | 7.90E-05 | 4700 | 0     | 2.19E-01 | 1.66E-04 | -3.72E-10 | 1.11E-16  |
| LPO2506-682 | 12 | 0.25 | 1     | 6.6   | 7.90E-05 | 3900 | 0     | 1.39E-01 | 1.86E-04 | -7.10E-10 | 2.36E-15  |
| LPO2506-103 | 13 | 0.29 | 1     | 10    | 7.90E-05 | 2800 | 0     | 2.06E-01 | 2.26E-04 | -4.64E-10 | -8.17E-16 |
| LPO2506-153 | 14 | 0.38 | 1.2   | 15.3  | 7.90E-05 | 2400 | 0     | 2.46E-01 | 2.69E-04 | -7.04E-10 | -8.57E-16 |
| LPO2506-223 | 12 | 0.44 | 1.4   | 22.6  | 7.90E-05 | 8000 | 0.3   | 9.33E-02 | 3.62E-04 | -1.57E-09 | 3.49E-15  |
| LPO2506-333 | 12 | 0.6  | 1.4   | 33    | 7.90E-05 | 6500 | 0.2   | 9.30E-02 | 4.05E-04 | -1.89E-09 | 3.60E-15  |
| LPO2506-473 | 13 | 0.84 | 1.4   | 47.8  | 1.00E-04 | 6100 | 0.15  | 1.45E-01 | 3.92E-04 | -1.56E-09 | 1.59E-15  |
| LPO2506-683 | 15 | 0.97 | 0.7   | 70    | 1.00E-03 | 5700 | 0.16  | 9.42E-02 | 4.48E-04 | -2.05E-09 | 3.82E-15  |
| LPO2506-104 | 20 | 1.28 | 0.9   | 100   | 2.70E-03 | 5000 | 0.1   | 2.19E-02 | 4.70E-04 | -2.97E-09 | 9.91E-15  |
| LPO2506-154 | 30 | 2    | 1.1   | 147   | 3.50E-03 | 4700 | 0.07  | 3.89E-01 | 4.41E-04 | -2.42E-09 | 6.70E-15  |
| LPO2506-224 | 30 | 3.1  | 1     | 220   | 3.40E-03 | 4700 | 0.037 | 4.64E-01 | 4.57E-04 | -2.36E-09 | 6.63E-15  |
| LPO2506-334 | 50 | 3.9  | 0.6   | 310   | 6.50E-03 | 5200 | 0.032 | 5.75E-01 | 4.61E-04 | -2.37E-09 | 6.23E-15  |
| LPO2506-474 | 50 | 4.9  | 0.3   | 460   | 1.25E-02 | 50   | 0     | 6.54E-01 | 4.73E-04 | -2.70E-09 | 9.48E-15  |
| LPO2506-684 | 50 | 7.9  | 0.3   | 680   | 1.25E-02 | 42   | 0     | 5.86E-01 | 5.26E-04 | -3.25E-09 | 1.16E-14  |
| LPO2506-105 | 50 | 12   | 0.15  | 1000  | 1.80E-02 | 32   | 0     | 6.37E-01 | 5.03E-04 | -2.76E-09 | 9.96E-15  |



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# Modeling Coilcraft Power Inductors

## LPT3305 Series

| Part number | R1 | R2   | C(nF) | L(μH) | k        | H1  | H2 | a         | b        | c         | d         |
|-------------|----|------|-------|-------|----------|-----|----|-----------|----------|-----------|-----------|
| LPT3305-102 | 10 | 0.07 | 1     | 1.15  | 7.30E-04 | 575 | 0  | -2.80E-01 | 5.23E-05 | -4.98E-10 | 2.85E-15  |
| LPT3305-152 | 10 | 0.08 | 1     | 1.6   | 6.50E-04 | 780 | 0  | 1.02E-01  | 5.50E-05 | -3.76E-10 | 2.33E-15  |
| LPT3305-222 | 10 | 0.1  | 1     | 2.4   | 6.50E-04 | 860 | 0  | 1.78E-01  | 5.41E-05 | 1.79E-10  | -2.23E-15 |
| LPT3305-332 | 10 | 0.15 | 1     | 3.3   | 6.50E-04 | 900 | 0  | 1.49E-01  | 7.11E-05 | -1.94E-11 | -8.97E-16 |
| LPT3305-472 | 10 | 0.25 | 1     | 5.1   | 6.80E-04 | 880 | 0  | 5.20E-02  | 1.11E-04 | -7.20E-10 | 3.00E-15  |
| LPT3305-682 | 10 | 0.3  | 5     | 7     | 7.50E-04 | 800 | 0  | 3.93E-02  | 1.30E-04 | -7.53E-10 | 2.54E-15  |
| LPT3305-103 | 10 | 0.38 | 9     | 10.7  | 9.40E-04 | 600 | 0  | 1.12E-01  | 1.57E-04 | -1.02E-09 | 3.42E-15  |
| LPT3305-153 | 15 | 0.58 | 9     | 16    | 1.50E-03 | 380 | 0  | 2.30E-01  | 1.44E-04 | -5.95E-10 | -5.68E-16 |
| LPT3305-223 | 20 | 0.9  | 10    | 23    | 1.80E-03 | 280 | 0  | 1.94E-01  | 1.57E-04 | -1.02E-09 | 2.39E-15  |
| LPT3305-333 | 20 | 1.05 | 9     | 33    | 2.50E-03 | 205 | 0  | 2.16E-01  | 1.96E-04 | -1.60E-09 | 4.33E-15  |
| LPT3305-473 | 20 | 1.3  | 6     | 47    | 4.00E-03 | 135 | 0  | 1.86E-01  | 2.17E-04 | -2.10E-09 | 8.26E-15  |

## DO1607 Series

| Part number | R1 | R2    | C(nF) | L(μH) | k        | H1   | H2     | a          | b          | c           | d           |
|-------------|----|-------|-------|-------|----------|------|--------|------------|------------|-------------|-------------|
| DO1607-102  | 1  | 0.048 | 1     | 0.84  | 0.000075 | 8100 | 0.0000 | 6.7312E-01 | 5.2311E-05 | 4.2625E-10  | -2.2112E-15 |
| DO1607-152  | 1  | 0.08  | 1     | 1.5   | 0.000076 | 7800 | 0.0000 | 8.9612E-01 | 6.7064E-05 | 6.0579E-10  | -4.5555E-15 |
| DO1607-222  | 6  | 0.09  | 1     | 2.3   | 0.000078 | 7200 | 0.0000 | 8.7903E-01 | 9.8740E-05 | 8.1841E-10  | -6.7725E-15 |
| DO1607-332  | 11 | 0.12  | 1     | 3.1   | 0.000079 | 5500 | 0.0000 | 8.4687E-01 | 1.0677E-04 | 9.1894E-10  | -8.5576E-15 |
| DO1607-472  | 11 | 0.35  | 1     | 4.4   | 0.000079 | 4900 | 0.0000 | 9.6128E-01 | 3.9310E-05 | 8.2137E-10  | -6.0168E-15 |
| DO1607-682  | 15 | 0.25  | 1     | 6.6   | 0.000076 | 3400 | 0.0000 | 8.7495E-01 | 1.1180E-04 | 1.0431E-09  | -9.2997E-15 |
| DO1607-103  | 15 | 0.27  | 1     | 9.6   | 9.00E-05 | 2500 | 0.0000 | 7.4251E-01 | 1.8793E-04 | 3.9581E-10  | -6.4409E-15 |
| DO1607-153  | 15 | 0.33  | 1     | 15    | 1.30E-04 | 3500 | 0.3000 | 5.8874E-01 | 2.6987E-04 | -4.9193E-10 | -1.5766E-15 |
| DO1607-223  | 16 | 0.48  | 1     | 21    | 2.60E-04 | 2300 | 0.3000 | 8.7903E-01 | 9.8740E-05 | 8.1841E-10  | -6.7725E-15 |
| DO1607-333  | 18 | 0.65  | 1     | 34    | 4.00E-04 | 2400 | 0.2700 | 5.0820E-01 | 3.2106E-04 | -1.1808E-09 | 3.7461E-16  |

## DO1608 Series

| Part number | R1 | R2    | C(nF) | L(μH) | k        | H1   | H2     | a           | b          | c           | d           |
|-------------|----|-------|-------|-------|----------|------|--------|-------------|------------|-------------|-------------|
| DO1608-102  | 15 | 0.03  | 0.1   | 1     | 1.10E-04 | 5900 | 0.0000 | 9.0532E-01  | 7.3089E-05 | 8.6233E-10  | -6.6849E-15 |
| DO1608-152  | 15 | 0.01  | 0.3   | 1.5   | 9.00E-05 | 7000 | 0.0000 | 1.0172E+00  | 3.4978E-04 | -6.0781E-10 | -6.1658E-15 |
| DO1608-222  | 15 | 0.01  | 0.5   | 1.8   | 9.00E-05 | 6500 | 0.0000 | 7.0576E-01  | 4.5337E-04 | -1.4794E-09 | -5.3484E-15 |
| DO1608-332  | 12 | 0.03  | 0.4   | 2.9   | 7.00E-05 | 7800 | 0.0000 | 8.4664E-02  | 4.6651E-04 | -1.1341E-09 | -4.1178E-15 |
| DO1608-472  | 12 | 0.05  | 0.4   | 4.5   | 1.00E-04 | 5500 | 0.0000 | 2.7050E-01  | 4.8500E-04 | -1.5530E-09 | -1.4703E-15 |
| DO1608-682  | 12 | 0.055 | 0.1   | 6.7   | 1.90E-04 | 3400 | 0.0000 | 7.2590E-02  | 5.2424E-04 | -1.6259E-09 | -1.3018E-15 |
| DO1608-103  | 10 | 0.08  | 0.1   | 9     | 2.60E-04 | 2600 | 0.0000 | 1.6038E-01  | 5.2831E-04 | -1.6646E-09 | -3.0144E-15 |
| DO1608-153  | 12 | 0.1   | 0.2   | 14    | 4.00E-04 | 1600 | 0.0000 | 2.2550E-01  | 5.6341E-04 | -1.6855E-09 | -3.2496E-15 |
| DO1608-223  | 11 | 0.21  | 0.1   | 21    | 5.00E-04 | 1300 | 0.0000 | 1.9830E-01  | 4.6582E-04 | -8.4403E-10 | -2.3077E-15 |
| DO1608-333  | 11 | 0.3   | 0.2   | 33    | 5.40E-04 | 1100 | 0.0000 | 1.5546E-01  | 5.9357E-04 | -2.0149E-09 | -4.3377E-17 |
| DO1608-473  | 11 | 0.4   | 0.4   | 46    | 7.80E-04 | 670  | 0.0000 | 8.2169E-01  | 5.1505E-04 | -5.7540E-10 | -7.4462E-15 |
| DO1608-683  | 10 | 0.6   | 0.4   | 68    | 1.00E-03 | 510  | 0.0000 | 1.8140E-01  | 5.9873E-04 | -2.1325E-09 | 2.4675E-15  |
| DO1608-104  | 10 | 0.75  | 0.2   | 97    | 2.10E-03 | 295  | 0.0000 | 9.8362E-02  | 5.7561E-04 | -1.6486E-09 | -6.5928E-16 |
| DO1608-154  | 7  | 1.5   | 0.3   | 145   | 2.00E-03 | 278  | 0.0000 | 2.8030E-01  | 5.5315E-04 | -2.1680E-09 | 5.1001E-15  |
| DO1608-224  | 5  | 2.2   | 0.1   | 215   | 4.00E-03 | 165  | 0.0000 | 2.6761E-01  | 4.9056E-04 | -1.0299E-09 | -1.1815E-15 |
| DO1608-334  | 5  | 2.5   | 0.1   | 300   | 6.00E-03 | 109  | 0.0000 | 3.2416E-01  | 5.5191E-04 | -1.1884E-09 | -2.5770E-15 |
| DO1608-474  | 5  | 3.4   | 0.1   | 420   | 1.00E-02 | 68   | 0.0000 | 1.0023E-01  | 5.8199E-04 | -2.1645E-09 | 1.2341E-15  |
| DO1608-684  | 1  | 7     | 0.1   | 680   | 9.00E-03 | 67   | 0.0000 | 2.6861E-02  | 5.6747E-04 | -1.7538E-09 | 2.4344E-15  |
| DO1608-105  | 1  | 9     | 0.08  | 1000  | 1.45E-02 | 43   | 0.0000 | -4.5838E-02 | 5.8724E-04 | -1.8609E-09 | 2.6806E-15  |



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# Modeling Coilcraft Power Inductors

## DS1608 Series

| Part number | R1 | R2    | C(nF) | L(μH) | k        | H1    | H2     | a           | b          | c           | d           |
|-------------|----|-------|-------|-------|----------|-------|--------|-------------|------------|-------------|-------------|
| DS1608-102  | 1  | 0.045 | 1     | 1.1   | 2.00E-05 | 33000 | 0.0000 | 8.2390E-01  | 1.1003E-04 | 9.9887E-10  | -8.6413E-15 |
| DS1608-152  | 6  | 0.033 | 1     | 1.5   | 2.00E-05 | 23000 | 0.0000 | 6.4652E-01  | 2.3212E-04 | 6.8690E-10  | -8.7691E-15 |
| DS1608-222  | 9  | 0.01  | 1     | 2.36  | 2.20E-05 | 15000 | 0.0000 | 5.0509E-01  | 1.1849E-03 | -6.5220E-09 | 8.0557E-15  |
| DS1608-332  | 9  | 0.02  | 1     | 3.56  | 2.30E-05 | 11800 | 0.0000 | -1.3934E-01 | 1.0957E-03 | -6.7778E-09 | 1.6608E-14  |
| DS1608-472  | 12 | 0.012 | 1     | 4.8   | 4.90E-05 | 6100  | 0.0000 | 1.2274E+00  | 1.9379E-03 | -2.2363E-08 | 9.1060E-14  |
| DS1608-682  | 8  | 0.024 | 1.1   | 6.65  | 3.00E-05 | 7400  | 0.0000 | 1.6274E-01  | 1.7478E-03 | -1.4904E-08 | 5.0984E-14  |
| DS1608-103  | 15 | 0.05  | 1.2   | 11    | 5.80E-05 | 2400  | 0.0000 | -6.2630E-02 | 1.3205E-03 | -1.2239E-08 | 4.2538E-14  |
| DS1608-153  | 15 | 0.047 | 0.9   | 14    | 6.00E-05 | 2500  | 0.0000 | 6.7089E-01  | 1.7946E-03 | -1.7255E-08 | 5.7464E-14  |
| DS1608-223  | 13 | 0.05  | 1     | 21    | 2.25E-04 | 7100  | 0.3600 | 1.1864E+00  | 1.9662E-03 | -2.3003E-08 | 9.1132E-14  |
| DS1608-333  | 16 | 0.1   | 1     | 33    | 4.20E-04 | 4100  | 0.2900 | 8.9307E-01  | 1.5969E-03 | -1.9280E-08 | 8.0724E-14  |
| DS1608-473  | 20 | 0.12  | 0.68  | 44    | 3.80E-04 | 7000  | 0.1850 | -1.1657E-02 | 1.8566E-03 | -2.0215E-08 | 7.6817E-14  |
| DS1608-683  | 27 | 0.15  | 0.6   | 65    | 1.10E-03 | 1200  | 0.1450 | 1.3814E+00  | 1.5913E-03 | -2.0577E-08 | 9.1712E-14  |
| DS1608-104  | 30 | 0.27  | 0.6   | 100   | 2.50E-03 | 450   | 0.1100 | 1.3055E+00  | 1.3177E-03 | -1.8809E-08 | 9.5105E-14  |
| DS1608-154  | 40 | 0.29  | 0.5   | 148   | 4.00E-03 | 260   | 0.0800 | 2.4906E+00  | 1.3422E-03 | -1.8962E-08 | 8.7567E-14  |
| DS1608-224  | 50 | 0.28  | 0.32  | 223   | 7.10E-03 | 130   | 0.0440 | 3.5589E+00  | 1.2980E-03 | -1.9533E-08 | 9.8782E-14  |
| DS1608-334  | 50 | 0.8   | 0.3   | 330   | 9.30E-03 | 45    | 0.0000 | 2.9150E+00  | 1.0588E-03 | -1.3772E-08 | 6.6678E-14  |
| DS1608-474  | 62 | 0.75  | 0.19  | 500   | 1.50E-02 | 31    | 0.0000 | 3.5896E+00  | 1.1814E-03 | -1.6005E-08 | 7.8953E-14  |
| DS1608-684  | 63 | 0.7   | 0.14  | 695   | 3.10E-02 | 18    | 0.0000 | 4.6926E+00  | 8.1101E-04 | -9.9502E-09 | 4.8393E-14  |
| DS1608-105  | 67 | 1.1   | 0.12  | 1095  | 3.30E-02 | 16    | 0.0000 | 2.2992E+00  | 1.4566E-03 | -2.0417E-08 | 1.0137E-13  |
| DS1608-155  | 40 | 3.5   | 0.04  | 1550  | 4.60E-02 | 14    | 0.0000 | 3.4696E+00  | 9.7579E-04 | -9.2487E-09 | 4.3610E-14  |
| DS1608-225  | 35 | 5.7   | 0.03  | 2200  | 6.00E-02 | 10.9  | 0.0000 | 2.9119E+00  | 9.8678E-04 | -8.4217E-09 | 3.6617E-14  |
| DS1608-335  | 35 | 6.9   | 0.03  | 3450  | 7.00E-02 | 9     | 0.0000 | 2.4424E+00  | 1.4112E-03 | -1.2363E-08 | 4.8521E-14  |
| DS1608-475  | 40 | 4.5   | 0.04  | 5200  | 1.60E-01 | 4.1   | 0.0000 | 5.3911E+00  | 1.3214E-03 | -1.6558E-08 | 7.9635E-14  |
| DS1608-685  | 40 | 20    | 0.04  | 6800  | 1.30E-01 | 5     | 0.0000 | 1.8814E+00  | 1.2472E-03 | -1.0900E-08 | 4.1819E-14  |
| DS1608-106  | 45 | 28    | 0.02  | 10000 | 1.70E-01 | 4     | 0.0000 | 1.4495E+00  | 1.4946E-03 | -1.6173E-08 | 8.2775E-14  |

## DT1608 Series

| Part number | R1 | R2    | C(nF) | L(μH) | k        | H1    | H2     | a          | b          | c           | d           |
|-------------|----|-------|-------|-------|----------|-------|--------|------------|------------|-------------|-------------|
| DT1608-102  | 1  | 0.035 | 1     | 0.87  | 6.00E-05 | 10700 | 0.0000 | 8.6027E-01 | 8.9423E-05 | 4.6465E-10  | -3.4038E-15 |
| DT1608-152  | 6  | 0.035 | 2     | 1.55  | 1.10E-05 | 21800 | 0.0000 | 5.8802E-01 | 2.5517E-04 | -5.9685E-11 | -3.4175E-15 |
| DT1608-222  | 10 | 0.037 | 1     | 2.5   | 2.20E-05 | 13800 | 0.0000 | 4.3244E-01 | 3.9846E-04 | -8.5182E-10 | -1.4944E-15 |
| DT1608-332  | 4  | 0.13  | 1     | 3.3   | 6.00E-05 | 10300 | 0.0000 | 8.1235E-01 | 1.2233E-04 | 5.4840E-10  | -4.9182E-15 |
| DT1608-472  | 4  | 0.05  | 1     | 4.3   | 7.00E-05 | 8000  | 0.0000 | 3.3863E-01 | 4.6555E-04 | -1.4014E-09 | 2.0707E-15  |
| DT1608-682  | 5  | 0.105 | 2     | 7     | 1.40E-04 | 3300  | 0.0000 | 5.3002E-01 | 3.6520E-04 | -1.1096E-09 | -2.2386E-16 |
| DT1608-103  | 5  | 0.205 | 2     | 9.8   | 1.45E-04 | 2700  | 0.0000 | 6.1434E-01 | 2.6362E-04 | -2.2730E-10 | -2.9731E-15 |
| DT1608-153  | 6  | 0.12  | 2.8   | 15    | 1.70E-04 | 1550  | 0.0000 | 3.7186E-01 | 7.3799E-04 | -5.1538E-09 | 1.4158E-14  |
| DT1608-223  | 8  | 0.2   | 1.7   | 21    | 3.30E-04 | 1050  | 0.0000 | 4.3678E-01 | 5.6818E-04 | -2.7964E-09 | 2.9571E-15  |
| DT1608-333  | 10 | 0.27  | 1.9   | 31.5  | 6.80E-04 | 2400  | 0.4000 | 4.4827E-01 | 6.0850E-04 | -4.7183E-09 | 1.4153E-14  |
| DT1608-473  | 8  | 0.43  | 0.8   | 47    | 1.70E-04 | 5100  | 0.0650 | 3.2617E-01 | 6.8351E-04 | -1.9896E-09 | 1.3203E-15  |
| DT1608-683  | 2  | 0.52  | 0.8   | 72    | 1.00E-03 | 2800  | 0.0600 | 3.7270E-01 | 7.3721E-04 | -2.6605E-09 | 3.5118E-15  |
| DT1608-104  | 16 | 0.95  | 0.8   | 98    | 2.20E-03 | 600   | 0.1000 | 4.0321E-01 | 5.5543E-04 | -3.7679E-09 | 1.0256E-14  |
| DT1608-154  | 5  | 0.95  | 0.8   | 140   | 2.20E-03 | 600   | 0.0360 | 3.6451E-01 | 7.5449E-04 | -3.8173E-09 | 9.0921E-15  |
| DT1608-224  | 15 | 1.1   | 0.8   | 235   | 1.30E-02 | 70    | 0.0400 | 1.2759E+00 | 6.2827E-04 | -8.0968E-09 | 3.9435E-14  |
| DT1608-334  | 2  | 1.6   | 0.8   | 315   | 1.80E-02 | 35    | 0.0000 | 1.1162E+00 | 5.8850E-04 | -6.6669E-09 | 3.1885E-14  |
| DT1608-474  | 2  | 1.6   | 0.1   | 470   | 3.40E-02 | 20    | 0.0000 | 1.4366E+00 | 5.1428E-04 | -5.7428E-09 | 2.8771E-14  |
| DT1608-684  | 2  | 2.5   | 0.1   | 700   | 4.00E-02 | 17    | 0.0000 | 1.3733E+00 | 5.7489E-04 | -5.9614E-09 | 3.0339E-14  |
| DT1608-105  | 1  | 5     | 0.01  | 1070  | 4.30E-02 | 16    | 0.0000 | 1.3997E+00 | 6.3614E-04 | -5.3978E-09 | 2.6267E-14  |



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# Modeling Coilcraft Power Inductors

## DO1813HC Series

| Part number  | R1 | R2   | C(nF) | L(μH) | k        | H1   | H2     | a           | b          | c           | d           |
|--------------|----|------|-------|-------|----------|------|--------|-------------|------------|-------------|-------------|
| DO1813HC-561 | 15 | 0.01 | 1     | 0.6   | 2.80E-04 | 1700 | 0      | 2.25E-01    | 4.62E-05   | 1.35E-10    | -2.05E-15   |
| DO1813HC-122 | 15 | 0.07 | 1     | 1.2   | 2.00E-04 | 2750 | 0      | 8.48E-02    | 8.16E-05   | -4.85E-10   | 2.60E-15    |
| DO1813HC-222 | 15 | 0.09 | 1     | 2.1   | 2.00E-04 | 3100 | 0      | 9.52E-02    | 1.12E-04   | -4.06E-10   | 1.75E-15    |
| DO1813HC-472 | 15 | 0.09 | 14    | 4.7   | 2.10E-04 | 3100 | 0      | 7.03E-02    | 2.94E-04   | -1.47E-09   | 3.10E-15    |
| DO1813HC-103 | 15 | 0.17 | 15    | 9.8   | 2.10E-04 | 2800 | 0      | -8.68E-02   | 3.70E-04   | -1.84E-09   | 2.13E-15    |
| DO1813HC-153 | 15 | 0.18 | 11    | 15    | 2.90E-04 | 2000 | 0      | 2.08E-01    | 5.05E-04   | -2.43E-09   | 5.12E-16    |
| DO1813HC-223 | 8  | 0.27 | 10    | 22    | 2.90E-04 | 1600 | 0      | 2.10E-01    | 5.07E-04   | -1.77E-09   | -3.12E-15   |
| DO1813HC-333 | 1  | 0.35 | 10    | 30    | 2.90E-04 | 1300 | 0      | 2.28E-01    | 5.76E-04   | -2.01E-09   | -1.54E-15   |
| DO1813HC-473 | 1  | 0.57 | 7     | 47    | 2.90E-04 | 6500 | 0.1    | 3.43E-01    | 5.31E-04   | -8.54E-10   | -7.68E-15   |
| DO1608-154   | 7  | 1.5  | 0.3   | 145   | 2.00E-03 | 278  | 0.0000 | 2.8030E-01  | 5.5315E-04 | -2.1680E-09 | 5.1001E-15  |
| DO1608-224   | 5  | 2.2  | 0.1   | 215   | 4.00E-03 | 165  | 0.0000 | 2.6761E-01  | 4.9056E-04 | -1.0299E-09 | -1.1815E-15 |
| DO1608-334   | 5  | 2.5  | 0.1   | 300   | 6.00E-03 | 109  | 0.0000 | 3.2416E-01  | 5.5191E-04 | -1.1884E-09 | -2.5770E-15 |
| DO1608-474   | 5  | 3.4  | 0.1   | 420   | 1.00E-02 | 68   | 0.0000 | 1.0023E-01  | 5.8199E-04 | -2.1645E-09 | 1.2341E-15  |
| DO1608-684   | 1  | 7    | 0.1   | 680   | 9.00E-03 | 67   | 0.0000 | 2.6861E-02  | 5.6747E-04 | -1.7538E-09 | 2.4344E-15  |
| DO1608-105   | 1  | 9    | 0.08  | 1000  | 1.45E-02 | 43   | 0.0000 | -4.5838E-02 | 5.8724E-04 | -1.8609E-09 | 2.6806E-15  |

## DO3308 Series

| Part number | R1 | R2   | C(nF) | L(μH) | k        | H1   | H2     | a           | b           | c           | d           |
|-------------|----|------|-------|-------|----------|------|--------|-------------|-------------|-------------|-------------|
| DO3308-103  | 16 | 0.03 | 0.7   | 10    | 6.00E-04 | 925  | 0.0000 | 9.5698E+00  | 1.9655E-05  | 5.0322E-09  | -3.8191E-14 |
| DO3308-153  | 15 | 0.1  | 1.3   | 16    | 1.00E-04 | 1470 | 0.0000 | -1.1994E-01 | 1.0723E-03  | -9.1485E-09 | 2.4326E-14  |
| DO3308-223  | 55 | 0.09 | 0.2   | 22    | 5.20E-04 | 840  | 0.0000 | 1.6028E+00  | 7.9466E-04  | -4.3809E-09 | 1.2168E-15  |
| DO3308-333  | 55 | 0.16 | 0.2   | 33    | 4.80E-04 | 750  | 0.0000 | 1.8799E-02  | 1.0364E-03  | -8.0118E-09 | 2.2062E-14  |
| DO3308-473  | 85 | 0.45 | 0.2   | 49    | 4.80E-04 | 5000 | 0.2000 | -3.4300E-01 | 5.4016E-04  | 1.6428E-02  | -2.6308E-09 |
| DO3308-683  | 68 | 0.7  | 0.2   | 65    | 4.80E-04 | 9800 | 0.1380 | 1.2109E-01  | 5.6315E-04  | -2.2341E-09 | 4.1701E-16  |
| DO3308-104  | 35 | 1.6  | 0.2   | 100   | 4.80E-04 | 9000 | 0.0490 | 4.0889E-01  | 3.8336E-04  | -7.0829E-10 | -1.0778E-15 |
| DO3308-154  | 80 | 1.15 | 0.2   | 148   | 5.50E-04 | 8000 | 0.0560 | -1.5201E-01 | 8.3291E-04  | -5.2225E-09 | 1.0029E-14  |
| DO3308-224  | 65 | 1.2  | 0.2   | 245   | 1.60E-03 | 8000 | 0.0340 | -4.2644E-01 | 1.3184E-03  | -1.1561E-08 | 3.6292E-14  |
| DO3308-334  | 65 | 1.75 | 0.2   | 330   | 1.60E-03 | 8500 | 0.0230 | -4.1549E-01 | 1.2851E-03  | -1.1265E-08 | 3.7114E-14  |
| DO3308-474  | 55 | 2.8  | 0.2   | 478   | 1.90E-03 | 8500 | 0.0140 | -3.3428E+00 | -3.8808E-03 | -2.1239E-05 | 9.0400E-09  |
| DO3308-684  | 55 | 4    | 0.2   | 660   | 1.90E-03 | 7400 | 0.0094 | -6.2291E-01 | 1.1852E-03  | -9.2070E-09 | 2.7293E-14  |
| DO3308-105  | 20 | 4.7  | 0.18  | 980   | 8.80E-03 | 7800 | 0.0055 | -5.5669E-01 | 1.2974E-03  | -9.5853E-09 | 3.1261E-14  |



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# Modeling Coilcraft Power Inductors

## DO3316 Series

| Part number | R1   | R2    | C(nF) | L( $\mu$ H) | k        | H1    | H2     | a          | b          | c           | d           |
|-------------|------|-------|-------|-------------|----------|-------|--------|------------|------------|-------------|-------------|
| DO3316-102  | 1    | 0.017 | 0.1   | 1.1         | 9.00E-05 | 8000  | 0.0000 | 5.3753E-01 | 2.4289E-04 | -9.3566E-10 | -3.2562E-16 |
| DO3316-152  | 1    | 0.06  | 0.1   | 1.6         | 2.00E-04 | 3200  | 0.0000 | 8.9421E-01 | 7.9445E-05 | 4.0877E-10  | -4.9305E-15 |
| DO3316-222  | 7    | 0.031 | 5     | 2.1         | 1.40E-04 | 4700  | 5.5000 | 5.7673E-01 | 2.6526E-04 | -1.3922E-09 | -1.7403E-16 |
| DO3316-332  | 7    | 0.001 | 4.8   | 3.2         | 9.50E-05 | 10000 | 4.6000 | 8.9029E+00 | 1.2821E-03 | -2.0676E-08 | 9.9708E-14  |
| DO3316-472  | 8    | 0.001 | 8     | 5.1         | 2.00E-04 | 4600  | 4.9000 | 1.0632E+01 | 8.5810E-04 | -1.6665E-08 | 8.8706E-14  |
| DO3316-682  | 8    | 0.001 | 6.5   | 7.4         | 3.50E-04 | 2700  | 3.1000 | 9.4497E+00 | 3.9878E-04 | -4.5603E-09 | 1.5059E-14  |
| DO3316-103  | 12   | 0.02  | 6     | 9.8         | 3.00E-04 | 3900  | 3.1000 | 5.8867E-01 | 1.2178E-03 | -2.1775E-08 | 1.1237E-13  |
| DO3316-153  | 8    | 0.025 | 6.5   | 14.5        | 3.20E-04 | 3600  | 1.4500 | 7.4070E+00 | 1.0397E-03 | -1.6123E-08 | 7.1822E-14  |
| DO3316-223  | 8.8  | 0.05  | 6     | 23          | 3.20E-04 | 5200  | 0.9000 | 5.6401E+00 | 1.3579E-03 | -2.1606E-08 | 9.8682E-14  |
| DO3316-333  | 8    | 0.06  | 5     | 34.8        | 4.20E-04 | 4000  | 0.4650 | 3.9937E+00 | 1.8769E-03 | -3.0596E-08 | 1.4567E-13  |
| DO3316-473  | 12.7 | 0.1   | 4     | 47          | 4.00E-04 | 8000  | 0.4300 | 5.4361E+00 | 1.8435E-03 | -3.3143E-08 | 1.6841E-13  |
| DO3316-683  | 9    | 0.1   | 4.2   | 67          | 9.00E-04 | 1400  | 0.2200 | 3.0850E+00 | 2.1083E-03 | -3.6243E-08 | 1.7969E-13  |
| DO3316-104  | 35   | 0.18  | 0.8   | 100         | 9.00E-04 | 2500  | 0.1320 | 8.1259E-01 | 2.4768E-03 | -3.9685E-08 | 1.8926E-13  |
| DO3316-154  | 41   | 0.3   | 1     | 145         | 9.00E-04 | 5000  | 0.1200 | 2.2344E+00 | 2.3632E-03 | -4.1927E-08 | 2.1328E-13  |
| DO3316-224  | 45   | 0.49  | 0.75  | 200         | 9.00E-04 | 8500  | 0.0800 | 2.4704E-01 | 2.5671E-03 | -4.4651E-08 | 2.3082E-13  |
| DO3316-334  | 43   | 0.7   | 0.6   | 322         | 2.00E-03 | 5400  | 0.0380 | 1.1074E+00 | 2.5200E-03 | -4.0230E-08 | 1.9453E-13  |
| DO3316-474  | 45   | 1     | 0.4   | 440         | 2.50E-03 | 3800  | 0.0213 | 6.7583E-01 | 2.5896E-03 | -3.7555E-08 | 1.7061E-13  |
| DO3316-684  | 89   | 1.8   | 0.2   | 680         | 2.60E-03 | 4200  | 0.0150 | 3.5352E-01 | 2.4296E-03 | -3.1644E-08 | 1.3020E-13  |
| DO3316-105  | 140  | 2.4   | 0.09  | 940         | 5.20E-03 | 4200  | 0.0080 | 1.7275E-02 | 2.3680E-03 | -2.7983E-08 | 1.1020E-13  |

## DS3316 Series

| Part number | R1 | R2    | C(nF) | L( $\mu$ H) | k        | H1    | H2     | a          | b          | c           | d           |
|-------------|----|-------|-------|-------------|----------|-------|--------|------------|------------|-------------|-------------|
| DS3316-102  | 1  | 0.035 | 0.5   | 1.18        | 8.40E-05 | 7800  | 0.0000 | 8.7361E-01 | 1.0582E-04 | 7.5753E-10  | -6.8417E-15 |
| DS3316-152  | 1  | 0.04  | 0.5   | 1.5         | 8.50E-05 | 8000  | 0.0000 | 8.0781E-01 | 1.3638E-04 | 5.2262E-10  | -5.5142E-15 |
| DS3316-222  | 1  | 0.043 | 0.5   | 2.45        | 8.20E-05 | 8250  | 0.0000 | 6.1732E-01 | 2.6027E-04 | 1.8401E-10  | -6.2489E-15 |
| DS3316-332  | 5  | 0.025 | 1.8   | 3.2         | 7.00E-05 | 7000  | 0.0000 | 1.0081E+00 | 5.8994E-04 | -2.6221E-09 | 1.5555E-15  |
| DS3316-472  | 1  | 0.13  | 0.6   | 4.8         | 1.10E-04 | 6100  | 0.0000 | 7.0077E-01 | 1.7425E-04 | 6.8576E-10  | -6.4767E-15 |
| DS3316-682  | 3  | 0.05  | 0.9   | 6.4         | 1.00E-04 | 6000  | 0.0000 | 2.0597E-01 | 6.4975E-04 | -1.5541E-09 | -3.7256E-15 |
| DS3316-103  | 6  | 0.12  | 1     | 11          | 1.00E-04 | 7500  | 0.2100 | 3.1563E-01 | 5.3500E-04 | -7.5241E-10 | -7.0361E-15 |
| DS3316-153  | 7  | 0.035 | 1     | 15          | 9.00E-05 | 10000 | 0.2100 | 6.5079E+00 | 1.8272E-03 | -8.7724E-09 | -9.3644E-15 |
| DS3316-223  | 7  | 0.07  | 1.2   | 22          | 9.00E-05 | 8000  | 0.1500 | 4.7515E+00 | 1.2885E-03 | 1.7770E-09  | -7.0195E-14 |
| DS3316-333  | 5  | 0.17  | 1.2   | 34          | 1.70E-04 | 8500  | 0.0950 | 5.1388E-02 | 1.2195E-03 | -5.3882E-09 | 5.1738E-15  |
| DS3316-473  | 6  | 0.45  | 1     | 45          | 1.40E-05 | 12000 | 0.0500 | 3.3024E-01 | 6.2499E-04 | -8.4227E-10 | -3.1831E-15 |



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# Modeling Coilcraft Power Inductors

## DT3316 Series

| Part number | R1 | R2    | C(nF) | L(μH) | k        | H1     | H2     | a           | b          | c           | d           |
|-------------|----|-------|-------|-------|----------|--------|--------|-------------|------------|-------------|-------------|
| DT3316-102  | 1  | 0.035 | 1     | 0.89  | 6.00E-05 | 10500  | 0.0000 | 8.7288E-01  | 9.0615E-05 | 5.1320E-10  | -4.9134E-15 |
| DT3316-152  | 4  | 0.035 | 1     | 1.4   | 9.00E-05 | 6900   | 0.0000 | 6.7139E-01  | 1.7166E-04 | -1.1792E-10 | -3.5674E-15 |
| DT3316-222  | 7  | 0.035 | 1     | 2.25  | 7.00E-05 | 7800   | 0.0000 | 4.6157E-01  | 3.3019E-04 | -7.8303E-10 | -3.8472E-15 |
| DT3316-332  | 7  | 0.08  | 1     | 3.1   | 7.00E-05 | 7100   | 0.0000 | 6.6677E-01  | 1.8568E-04 | 5.4508E-10  | -6.4745E-15 |
| DT3316-472  | 20 | 0.037 | 1.3   | 4.8   | 5.30E-05 | 3400   | 0.0000 | 1.0683E-01  | 8.1489E-04 | -7.4068E-09 | 2.2541E-14  |
| DT3316-682  | 17 | 0.25  | 1     | 6.4   | 5.30E-05 | 3600   | 0.0000 | 9.3396E-01  | 8.8040E-05 | 1.4572E-09  | -1.1164E-14 |
| DT3316-103  | 22 | 0.045 | 1     | 10    | 7.00E-05 | 2100   | 0.0000 | -6.8495E-02 | 1.4637E-03 | -1.7410E-08 | 7.0016E-14  |
| DT3316-153  | 24 | 0.05  | 1     | 17    | 1.10E-04 | 150000 | 0.7500 | 5.0039E-01  | 1.9799E-03 | -2.6705E-08 | 1.1371E-13  |
| DT3316-223  | 20 | 0.09  | 0.9   | 23    | 5.00E-05 | 150000 | 0.5000 | -2.7139E-01 | 1.8023E-03 | -1.8409E-08 | 5.9924E-14  |
| DT3316-333  | 32 | 0.06  | 0.8   | 35    | 5.00E-04 | 2400   | 0.3500 | 2.5082E+00  | 1.9430E-03 | -3.0068E-08 | 1.4474E-13  |
| DT3316-473  | 33 | 0.12  | 0.7   | 47    | 4.00E-04 | 9000   | 0.2500 | 5.5084E-01  | 1.9639E-03 | -2.6898E-08 | 1.1823E-13  |
| DT3316-683  | 36 | 0.17  | 0.6   | 68    | 5.00E-04 | 18000  | 0.1700 | 2.2255E+00  | 1.9686E-03 | -2.6433E-08 | 1.1697E-13  |
| DT3316-104  | 37 | 0.24  | 0.4   | 94    | 9.00E-04 | 2500   | 0.0930 | 1.6357E+00  | 1.8998E-03 | -2.3862E-08 | 1.0593E-13  |
| DT3316-154  | 50 | 0.22  | 0.3   | 144   | 2.40E-03 | 500    | 0.0600 | 3.6442E+00  | 1.8506E-03 | -2.6090E-08 | 1.2410E-13  |
| DT3316-224  | 60 | 0.22  | 0.2   | 220   | 5.00E-03 | 130    | 0.0200 | 4.9683E+00  | 1.6998E-03 | -2.4489E-08 | 1.2267E-13  |
| DT3316-334  | 60 | 0.4   | 0.04  | 360   | 4.80E-03 | 120    | 0.0000 | 3.6222E+00  | 2.5193E-03 | -2.9029E-08 | 1.3399E-13  |
| DT3316-474  | 80 | 0.4   | 0.05  | 510   | 1.50E-02 | 40     | 0.0000 | 7.7296E+00  | 1.1392E-03 | -1.3397E-08 | 6.7545E-14  |
| DT3316-684  | 80 | 0.9   | 0.02  | 760   | 1.90E-02 | 34     | 0.0000 | 6.9452E+00  | 1.2074E-03 | -1.1090E-08 | 4.9880E-14  |
| DT3316-105  | 80 | 0.85  | 0.04  | 1000  | 2.20E-02 | 27     | 0.0000 | 9.0356E+00  | 1.4446E-03 | -1.6921E-08 | 8.5226E-14  |

## DO3316HC Series

| Part number  | R1 | R2    | C(nF) | L(μH) | k        | H1    | H2      | a           | b          | c           | d           |
|--------------|----|-------|-------|-------|----------|-------|---------|-------------|------------|-------------|-------------|
| DO3316HC-331 | 1  | 0.12  | 1     | 0.3   | 2.10E-04 | 5000  | 0.0000  | 1.0248E-01  | 8.4893E-06 | 5.3963E-11  | -4.6676E-16 |
| DO3316HC-681 | 6  | 0.03  | 1     | 0.67  | 1.30E-04 | 4400  | 0.0000  | 6.2433E-01  | 4.8008E-05 | 5.1753E-10  | -4.4698E-15 |
| DO3316HC-102 | 52 | 0.02  | 1     | 1     | 7.00E-06 | 12000 | 5.0000  | -3.4992E-02 | 3.7956E-04 | -3.0459E-09 | 8.3781E-15  |
| DO3316HC-152 | 60 | 0.035 | 1     | 1.46  | 7.00E-05 | 5500  | 10.0000 | 6.7316E-01  | 2.2028E-04 | -1.6103E-09 | 3.4331E-15  |
| DO3316HC-222 | 30 | 0.06  | 1     | 2.1   | 2.00E-04 | 2300  | 0.0000  | 7.8796E-01  | 1.2558E-04 | -1.3361E-12 | -4.2988E-15 |
| DO3316HC-272 | 60 | 0.2   | 1     | 2.7   | 1.00E-04 | 1900  | 0.0000  | 9.2535E-01  | 5.5482E-05 | 3.0119E-10  | -3.4634E-15 |
| DO3316HC-332 | 80 | 0.02  | 1     | 3.3   | 1.20E-04 | 16000 | 13.0000 | 6.8997E-03  | 7.8887E-04 | -1.2826E-08 | 6.2405E-14  |

## DO3340 Series

| Part number | R1   | R2    | C(nF) | L(μH) | k        | H1    | H2     | a           | b          | c           | d          |
|-------------|------|-------|-------|-------|----------|-------|--------|-------------|------------|-------------|------------|
| DO3340-103  | 8    | 0.056 | 2     | 10    | 7.60E-05 | 2780  | 0.0000 | -6.7235E-01 | 1.2025E-03 | -1.0873E-08 | 3.5063E-14 |
| DO3340-153  | 8    | 0.056 | 2     | 15    | 2.00E-04 | 1500  | 0.0000 | -2.2273E-01 | 1.3816E-03 | -1.4300E-08 | 4.9962E-14 |
| DO3340-223  | 8    | 0.06  | 2.2   | 22    | 3.40E-04 | 915   | 0.0000 | -2.3323E-01 | 1.6939E-03 | -2.1570E-08 | 9.1417E-14 |
| DO3340-333  | 8    | 0.16  | 2.4   | 32    | 3.50E-04 | 680   | 0.0000 | -1.5620E-01 | 1.2939E-03 | -1.5125E-08 | 6.2301E-14 |
| DO3340-473  | 8    | 0.1   | 3.8   | 47    | 3.70E-04 | 12000 | 0.2800 | 7.5910E-01  | 2.4068E-03 | -3.9781E-08 | 1.9728E-13 |
| DO3340-683  | 9    | 0.15  | 2.8   | 68    | 5.00E-04 | 6000  | 0.1650 | 2.9266E-01  | 2.5274E-03 | -4.0495E-08 | 1.9804E-13 |
| DO3340-104  | 11.5 | 0.145 | 2.6   | 94    | 8.00E-04 | 2000  | 0.1370 | 2.6175E+00  | 2.6812E-03 | -4.6371E-08 | 2.3614E-13 |
| DO3340-154  | 14   | 0.15  | 1.9   | 150   | 1.80E-03 | 680   | 0.0760 | 3.2604E+00  | 2.8062E-03 | -4.9856E-08 | 2.5471E-13 |
| DO3340-224  | 15   | 0.2   | 1.75  | 210   | 2.20E-03 | 540   | 0.0480 | 5.4710E+00  | 2.9777E-03 | -5.5456E-08 | 2.9553E-13 |
| DO3340-334  | 18   | 0.4   | 1.3   | 315   | 2.50E-03 | 640   | 0.0330 | 3.5321E+00  | 3.1172E-03 | -5.4266E-08 | 2.7771E-13 |
| DO3340-474  | 18   | 0.35  | 0.6   | 470   | 6.00E-03 | 150   | 0.0110 | 4.1856E+00  | 3.3224E-03 | -5.4642E-08 | 2.6993E-13 |
| DO3340-684  | 18   | 0.3   | 0.7   | 650   | 9.00E-03 | 80    | 0.0070 | 3.5993E+00  | 3.4752E-03 | -6.1566E-08 | 3.1900E-13 |
| DO3340-105  | 32   | 0.7   | 0.28  | 980   | 1.20E-02 | 73    | 0.0045 | 3.0997E+00  | 3.4552E-03 | -5.5618E-08 | 2.7572E-13 |



Specifications subject to change without notice. Document 209-7 Revised 8/20/99

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# Modeling Coilcraft Power Inductors

## DO5022 Series

| Part number | R1  | R2    | C(nF) | L(μH) | k        | H1    | H2     | a           | b          | c           | d           |
|-------------|-----|-------|-------|-------|----------|-------|--------|-------------|------------|-------------|-------------|
| DO5022-102  | 5   | 0.001 | 1     | 1     | 6.00E-05 | 10500 | 0.0000 | 2.3078E+00  | 6.7997E-04 | -7.0505E-09 | 2.8278E-14  |
| DO5022-222  | 2   | 0.05  | 1     | 2.4   | 1.34E-04 | 4900  | 0.0000 | 6.9894E-01  | 1.9050E-04 | 1.4514E-10  | -5.1455E-15 |
| DO5022-332  | 9   | 0.05  | 1     | 3.3   | 1.00E-04 | 5100  | 0.0000 | 6.2663E-01  | 3.5146E-04 | -1.2934E-09 | -8.0562E-16 |
| DO5022-562  | 20  | 0.07  | 1     | 5.53  | 1.00E-04 | 2900  | 0.0000 | 3.4155E-01  | 4.5856E-04 | -2.5690E-09 | 3.7011E-15  |
| DO5022-103  | 30  | 0.09  | 1     | 9.6   | 1.40E-04 | 1400  | 0.0000 | 1.1442E-01  | 6.9906E-04 | -6.9717E-09 | 2.4674E-14  |
| DO5022-153  | 34  | 0.05  | 1.3   | 15    | 1.50E-04 | 15000 | 1.4000 | -8.2638E-01 | 1.7988E-03 | -3.0455E-08 | 1.5469E-13  |
| DO5022-223  | 54  | 0.03  | 1     | 21    | 5.50E-04 | 2200  | 1.1500 | 1.4395E+00  | 1.5216E-03 | -2.8268E-08 | 1.5116E-13  |
| DO5022-333  | 48  | 0.06  | 1     | 31    | 4.50E-04 | 3800  | 0.7000 | 1.3193E+00  | 1.8380E-03 | -3.2983E-08 | 1.7179E-13  |
| DO5022-473  | 55  | 0.06  | 1     | 46    | 8.00E-04 | 1600  | 0.5000 | 3.7973E+00  | 1.8742E-03 | -3.7066E-08 | 2.0401E-13  |
| DO5022-683  | 52  | 0.09  | 1     | 67    | 9.00E-04 | 1600  | 0.3200 | 3.9123E+00  | 2.0439E-03 | -3.9411E-08 | 2.1315E-13  |
| DO5022-104  | 58  | 0.18  | 0.8   | 94    | 9.00E-04 | 3400  | 0.2100 | 4.2186E+00  | 1.9771E-03 | -3.6530E-08 | 1.9364E-13  |
| DO5022-154  | 102 | 0.2   | 0.56  | 150   | 1.50E-03 | 1500  | 0.1500 | 5.7525E+00  | 2.0779E-03 | -4.1313E-08 | 2.2696E-13  |
| DO5022-224  | 110 | 0.3   | 0.39  | 215   | 2.00E-03 | 1500  | 0.0850 | 5.1212E+00  | 2.3717E-03 | -4.5732E-08 | 2.4868E-13  |
| DO5022-334  | 111 | 0.35  | 0.3   | 320   | 4.00E-03 | 300   | 0.0450 | 5.0069E+00  | 2.4612E-03 | -4.5360E-08 | 2.3977E-13  |
| DO5022-474  | 107 | 0.4   | 0.38  | 410   | 5.80E-03 | 200   | 0.0400 | 5.3890E+00  | 2.3252E-03 | -4.4977E-08 | 2.4354E-13  |
| DO5022-684  | 107 | 0.7   | 0.3   | 640   | 7.00E-03 | 200   | 0.0220 | 5.8974E+00  | 2.5263E-03 | -4.5879E-08 | 2.3937E-13  |
| DO5022-105  | 110 | 0.7   | 0.21  | 940   | 1.40E-02 | 70    | 0.0115 | 4.8929E+00  | 2.6068E-03 | -4.5664E-08 | 2.3371E-13  |

## DS5022 Series

| Part number | R1 | R2    | C(nF) | L(μH) | k        | H1     | H2     | a           | b          | c           | d          |
|-------------|----|-------|-------|-------|----------|--------|--------|-------------|------------|-------------|------------|
| DS5022-103  | 12 | 0.085 | 1     | 9     | 1.40E-05 | 4950   | 0.0000 | -4.9728E-02 | 7.2829E-04 | -2.9883E-09 | 1.2501E-15 |
| DS5022-153  | 16 | 0.08  | 1     | 14    | 1.40E-05 | 2500   | 0.0000 | -6.5229E-01 | 1.3042E-03 | -1.0366E-08 | 2.6825E-14 |
| DS5022-223  | 18 | 0.125 | 1     | 19    | 1.40E-05 | 1650   | 0.0000 | -2.3764E-01 | 1.0670E-03 | -7.4959E-09 | 1.5948E-14 |
| DS5022-333  | 20 | 0.08  | 1     | 31    | 2.80E-04 | 11000  | 0.3500 | -3.8331E-01 | 2.0456E-03 | -2.6680E-08 | 1.1164E-13 |
| DS5022-473  | 27 | 0.1   | 0.9   | 45    | 3.50E-04 | 11000  | 0.2700 | -3.8813E-01 | 2.4831E-03 | -3.7829E-08 | 1.7685E-13 |
| DS5022-683  | 27 | 0.13  | 0.8   | 65    | 4.00E-04 | 14000  | 0.1650 | 6.0913E-02  | 2.6598E-03 | -3.8870E-08 | 1.7583E-13 |
| DS5022-104  | 27 | 0.2   | 0.65  | 91    | 4.30E-04 | 150000 | 0.0970 | 4.5249E-01  | 2.6681E-03 | -3.6042E-08 | 1.5396E-13 |
| DS5022-154  | 29 | 0.28  | 0.5   | 140   | 5.20E-04 | 140000 | 0.0530 | 5.6972E-01  | 2.8465E-03 | -3.5134E-08 | 1.3783E-13 |
| DS5022-224  | 27 | 0.35  | 0.4   | 200   | 5.60E-04 | 130000 | 0.0270 | -6.7167E-01 | 3.5654E-03 | -4.3297E-08 | 1.7054E-13 |
| DS5022-334  | 34 | 0.55  | 0.2   | 325   | 2.20E-03 | 145    | 0.0000 | 7.4244E-01  | 3.0410E-03 | -3.4757E-08 | 1.3633E-13 |
| DS5022-474  | 28 | 0.65  | 0.18  | 474   | 2.00E-03 | 143    | 0.0000 | 1.3624E-01  | 3.6292E-03 | -3.3225E-08 | 1.0379E-13 |
| DS5022-684  | 32 | 0.8   | 0.17  | 630   | 4.00E-03 | 270    | 0.0250 | 4.5328E-01  | 3.6124E-03 | -3.9817E-08 | 1.4606E-13 |
| DS5022-105  | 30 | 1.4   | 0.17  | 850   | 4.00E-03 | 75     | 0.0000 | 4.3986E-01  | 3.2796E-03 | -3.1631E-08 | 1.0695E-13 |

## DO5022HC Series

| Part number  | R1 | R2    | C(nF) | L(μH) | k        | H1    | H2     | a           | b          | c           | d           |
|--------------|----|-------|-------|-------|----------|-------|--------|-------------|------------|-------------|-------------|
| DO5022HC-781 | 1  | 0.042 | 1     | 0.74  | 1.00E-05 | 63500 | 0.0000 | 9.1053E-01  | 3.8048E-05 | 1.3634E-09  | -7.4371E-15 |
| DO5022HC-102 | 5  | 0.02  | 12    | 1     | 1.00E-05 | 10000 | 1.0000 | -3.4992E-02 | 3.7956E-04 | -3.0459E-09 | 8.3781E-15  |
| DO5022HC-152 | 5  | 0.03  | 6     | 1.28  | 1.70E-05 | 12000 | 0.0000 | 5.1951E-02  | 2.2098E-04 | 3.0345E-10  | -7.5496E-15 |
| DO5022HC-222 | 5  | 0.104 | 5     | 2.1   | 4.00E-05 | 6800  | 0.0000 | 7.8272E-01  | 8.3155E-05 | 7.6329E-10  | -6.8170E-15 |
| DO5022HC-332 | 6  | 0.16  | 5     | 2.9   | 4.00E-05 | 4600  | 0.0000 | 8.6755E-01  | 7.6746E-05 | 6.0559E-10  | -5.5910E-15 |
| DO5022HC-392 | 6  | 0.07  | 7     | 3.7   | 7.00E-05 | 5000  | 3.1000 | 4.2618E-01  | 3.3290E-04 | -2.6279E-09 | 8.5403E-15  |
| DO5022HC-472 | 7  | 0.05  | 6     | 5     | 1.20E-04 | 5200  | 3.1000 | 2.1772E-01  | 5.7976E-04 | -6.1020E-09 | 2.2820E-14  |
| DO5022HC-602 | 7  | 0.06  | 6     | 6.2   | 1.20E-04 | 8000  | 3.0000 | -3.9773E-02 | 6.6961E-04 | -7.5695E-09 | 2.9755E-14  |
| DO5022HC-782 | 11 | 0.03  | 4     | 7.4   | 1.20E-04 | 12000 | 2.8000 | -1.5889E-01 | 1.4912E-03 | -2.5800E-08 | 1.3510E-13  |
| DO5022HC-103 | 7  | 0.02  | 7     | 10.7  | 2.00E-04 | 7000  | 1.9000 | 1.0749E+00  | 1.7484E-03 | -3.1932E-08 | 1.6977E-13  |



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