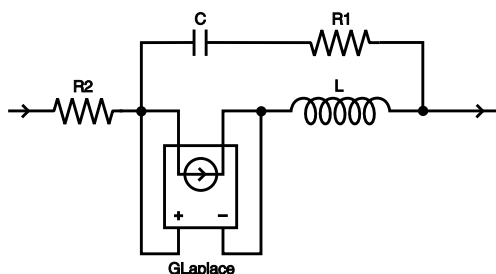


Modeling Coilcraft RF Inductors

This data allows you to create a model that adequately simulates the behavior of Coilcraft RF inductors from 1 MHz to 1.8 GHz.

PSpice® Equivalent of Circuit

An equivalent PSpice® model of a practical inductor is illustrated in schematic form below.



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

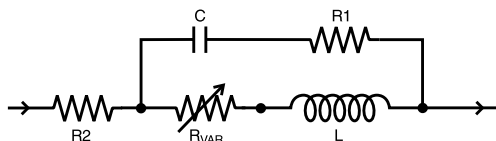
- GLaplace is a model for the ac inductor resistance. The GLaplace statement defines a frequency dependent current which simulates the frequency dependent resistance. GLaplace consists of the two equations:

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

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

Using Other Simulation Software

- If your particular modeling program does not support use of the Laplace transform, you may substitute a variable resistor that has a value of $k * \sqrt{f}$.



- $R_{VAR} = k * \sqrt{f}$ (k can be taken from the accompanying tables, and f is expressed in Hz).
- k and H are constants which relate to the skin effect and other inductor losses.
- All required values can be taken from the accompanying tables.

0402CS Series

Part number	R1	R2	C(pF)	L(nH)	k	H
0402CS-1N0	2	0.001	0.2	1.3	6.00E-06	104000
0402CS-2N0	2	0.001	0.1	2.2	9.80E-06	68000
0402CS-2N2	1	0.01	0.2	2.2	8.00E-06	86500
0402CS-3N3	2	0.001	0.09	3.4	1.20E-05	54000
0402CS-3N6	2	0.001	0.1	3.6	1.30E-05	50000
0402CS-3N9	2	0.001	0.05	3.9	1.30E-05	51000
0402CS-5N1	2	0.001	0.05	5.1	1.70E-05	39500
0402CS-5N6	2	0.001	0.05	5.6	1.75E-05	38000
0402CS-6N2	2	0.001	0.05	6.3	2.20E-05	30500
0402CS-7N5	2	0.001	0.05	7.5	2.60E-05	26000
0402CS-8N2	2	0.001	0.12	8.4	2.70E-05	23500
0402CS-9N0	2	0.001	0.08	8.9	2.80E-05	23300
0402CS-10N	2	0.001	0.08	10.1	3.10E-05	21500
0402CS-11N	2	0.001	0.09	10.8	3.50E-05	18600
0402CS-12N	2	0.001	0.09	12	3.90E-05	16700
0402CS-15N	2	0.001	0.1	15	5.10E-05	12900
0402CS-19N	2	0.001	0.1	18	6.00E-05	11000
0402CS-23N	3	0.001	0.11	22	7.00E-05	9000
0402CS-27N	4	0.001	0.1	26	8.00E-05	7700
0402CS-36N	5	0.001	0.1	36	1.20E-04	5200
0402CS-40N	7	0.001	0.11	40	1.30E-04	4600
0402CS-47N	10	0.01	0.07	46	1.40E-04	4997

0603CS Series

Part number	R1	R2	C(pF)	L(nH)	k	H
0603CS-1N6	1	0.001	0.05	1.6	6.00E-06	116000
0603CS-1N8	1	0.01	0.01	1.65	6.10E-06	115000
0603CS-3N6	1	0.001	0.05	3.6	1.30E-05	53500
0603CS-3N9	1	0.01	0.08	3.5	1.15E-05	61000
0603CS-4N3	1	0.001	0.05	4.2	1.38E-05	50500
0603CS-4N7	1	0.001	0.05	4.6	1.75E-05	39800
0603CS-5N1	1	0.001	0.05	5.2	2.00E-05	34800
0603CS-6N8	1	0.04	0.08	6.6	1.77E-05	39800
0603CS-7N5	1	0.001	0.08	7.6	2.05E-05	34100
0603CS-8N7	1	0.001	0.15	8.4	2.40E-05	29400
0603CS-9N5	1	0.001	0.02	9.8	3.15E-05	22000
0603CS-10N	1	0.025	0.075	9.7	2.60E-05	27000
0603CS-11N	7	0.001	0.04	11.1	2.70E-05	20200
0603CS-12N	1	0.03	0.13	10.6	2.40E-05	23500
0603CS-15N	2	0.035	0.09	14	3.20E-05	21800
0603CS-16N	6	0.05	0.08	16.5	3.20E-05	15800
0603CS-18N	2	0.01	0.135	17	3.80E-05	18500
0603CS-22N	5	0.01	0.011	20	4.30E-05	15900
0603CS-24N	6	0.08	0.1	24	4.10E-05	12500
0603CS-27N	1	0.25	0.085	26	5.65E-05	12000
0603CS-30N	4	0.08	0.12	30	5.00E-05	11200
0603CS-33N	19	0.01	0.09	32	6.90E-05	10200
0603CS-36N	4	0.08	0.12	35.5	6.50E-05	9000

(continued)

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Modeling Coilcraft RF Inductors

0603CS-39N	20	0.01	0.08	39	9.00E-05	7800
0603CS-43N	6	0.08	0.1	42	7.50E-05	7500
0603CS-47N	15	0.01	0.09	45	1.00E-04	7000
0603CS-56N	20	0.01	0.086	54	1.18E-04	6000
0603CS-68N	15	0.01	0.078	67	1.45E-04	4800
0603CS-72N	28	0.01	0.06	71	1.60E-04	4400
0603CS-82N	25	0.01	0.063	80.5	1.65E-04	4300
0603CS-R10	70	0.01	0.079	95	2.00E-04	3500
0603CS-R11	80	0.01	0.07	112	2.30E-04	3000
0603CS-R12	85	0.01	0.074	120	2.40E-04	2900
0603CS-R15	40	0.1	0.1	150	3.50E-04	2015
0603CS-R18	25	0.4	0.1	180	2.70E-04	1800
0603CS-R22	25	0.6	0.097	220	3.30E-04	1650
0603CS-R27	45	0.6	0.09	280	3.90E-04	1150

0603HC Series

Part number	R1	R2	C(pF)	L(nH)	k	H
0603HC-1N6	9	0.025	0.16	1	1.50E-05	43750
0603HC-3N6	3	0.025	0.22	3	1.20E-05	57500
0603HC-3N9	3	0.37	0.3	3	1.20E-05	53000
0603HC-6N8	2	0.07	0.19	6	1.80E-05	38500
0603HC-7N5	3	0.32	0.21	7	1.90E-05	35000
0603HC-10N	7	0.3	0.12	10	2.70E-05	25100
0603HC-12N	9	0.025	0.08	12	5.00E-05	13900
0603HC-15N	5	0.025	0.12	15	5.40E-05	12900
0603HC-18N	5	0.05	0.16	18	1.80E-04	3730
0603HC-22N	8	0.025	0.16	22	7.80E-05	8900
0603HC-24N	8	0.025	0.21	24	7.60E-05	9200

0805CS and HS Series

Part number	R1	R2	C(pF)	L(nH)	k	H
0805CS-020	3	0.04	0.04	2.5	6.00E-06	116000
0805CS-3N0	1	0.25	0.09	2.7	1.50E-05	44500
0805CS-030	3	0.075	0.14	3.1	7.40E-06	95000
0805CS-050	5	0.007	0.18	5.3	1.00E-05	70100
0805CS-060	4	0.081	0.1	6.4	1.62E-05	44500
0805CS-070	1	0.081	0.15	7	1.80E-05	37900
0805CS-080	0.5	0.018	0.1471	8.2	1.80E-05	39000
0805CS-100	2	0.081	0.15	10	1.50E-05	45200
0805CS-120	0.5	0.25	0.12	12	2.70E-05	25000
0805CS-150	9	0.13	0.13	14.2	3.80E-05	24000
0805CS-180	5	0.01	0.1	18	3.50E-05	19500
0805CS-220	10	0.05	0.13	22	4.40E-05	16000
0805CS-240	12	0.01	0.19	28	6.80E-05	10300
0805CS-270	20	0.25	0.17	27	4.30E-05	13700
0805CS-330	10	0.18	0.123	31	4.70E-05	15200
0805CS-360	10	0.11	0.23	38	6.30E-05	10900
0805CS-390	15	0.1	0.105	37	5.50E-05	12700
0805CS-430	10	3	0.18	48	6.50E-05	6300
0805CS-470	30	0.01	0.13	47	9.60E-05	7300
0805CS-560	30	0.01	0.115	55.5	1.06E-04	7100
0805CS-680	25	0.01	0.105	68	1.09E-04	6400
0805CS-820	15	0.01	0.12	82	1.20E-04	5800

0805CS-910	12	0.8	.2p	91	8.00E-05	7750
0805CS-101	25	0.001	0.1	96	1.40E-04	5000
0805CS-111	10	0.5	0.23	110	1.40E-04	4750
0805CS-121	45	0.09	0.11	120	1.60E-04	4100
0805CS-151	35	0.01	0.118	145	2.50E-04	3100
0805CS-181	30	0.01	0.11	180	2.50E-04	2800
0805CS-221	40	0.1	0.084	215	2.90E-04	2400
0805CS-241	16	0.09	0.21	240	3.50E-04	2000
0805CS-271	60	0.01	0.005	250	1.50E-03	1800
0805CS-331	60	0.01	0.168	315	4.34E-04	1200
0805CS-391	60	0.01	0.002	375	2.30E-03	1000
0805CS-471	63	0.01	0.22	482	8.00E-04	865
0805CS-561	80	0.01	0.34	560	1.05E-03	670
0805CS-681	88	0.01	0.47	680	1.20E-03	585
0805CS-821	85	0.01	0.7	820	1.40E-03	495

0805HQ Series

Part number	R1	R2	C(pF)	L(nH)	k	H
0805HQ-2N5	5	0.001	0.019	2.7	4.90E-06	127000
0805HQ-5N6	5	0.001	0.001	5.9	1.30E-05	54000
0805HQ-6N2	5	0.001	0.045	6.5	1.02E-05	51500
0805HQ-12N	6	0.001	0.08	12.8	1.70E-05	26800
0805HQ-16N	6	0.07	0.075	16.8	2.00E-05	22500
0805HQ-18N	7	0.03	0.1	19	2.00E-05	21500
0805HQ-20N	7	0.04	0.16	21	2.00E-05	20500
0805HQ-27N	6	0.09	0.14	27	2.25E-05	19000
0805HQ30N	6	0.1	0.16	30	4.00E-05	12500
0805HQ-39N	9	0.06	0.15	41	3.80E-05	11500
0805HQ-48N	9	0.06	0.177	48	4.60E-05	9600
0805HQ-51N	9	0.06	0.175	49	5.00E-05	9000

0805HT Series

Part number	R1	R2	C(pF)	L(nH)	k	H
0805HT-1N8	0.01	0.01	0.1	2	9.10E-06	76400
0805HT-3N9	1	0.001	0.2	3.8	1.05E-05	67000
0805HT-4N7	0.5	0.03	0.1	4.75	1.55E-05	44800
0805HT-6N8	2	0.07	0.03	7.2	2.60E-05	27000
0805HT-8N2	1	0.02	0.07	8.1	2.30E-05	30200
0805HT-10N	45	0.001	0.1	9.8	1.90E-05	37000
0805HT-12N	30	0.001	0.1	11	2.50E-05	28000
0805HT-15N	33	0.001	0.11	14.8	2.80E-05	25000
0805HT-18N	40	0.001	0.1	17	3.30E-05	21300
0805HT-22N	12	0.005	0.065	21.5	5.30E-05	13300
0805HT-27N	8	0.01	0.125	26	6.00E-05	11700
0805HT-33N	9	0.01	0.088	33	6.70E-05	10500
0805HT-39N	10	0.01	0.078	37.5	8.00E-05	8800
0805HT-47N	12	0.001	0.082	45	9.80E-05	7200
0805HT-56N	25	0.01	0.065	55.5	1.17E-04	5900
0805HT-68N	20	0.01	0.086	66	1.40E-04	5000
0805HT-82N	22	0.01	0.075	80	1.60E-05	4400
0805HT-R10	90	0.01	0.078	100	1.80E-04	3900
0805HT-R12	85	0.01	0.082	120	2.00E-04	3500
0805HT-R15	75	0.01	0.085	150	2.65E-04	2650



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1008CS and HS Series

Part number	R1	R2	C(pF)	L(nH)	k	H
1008CS-100	6	0.05	0.13	9.6	2.00E-05	34800
1008CS-120	13	0.01	0.15	12	2.05E-05	34000
1008CS-150	8	0.01	0.22	13	2.70E-05	26000
1008CS-180	35	0.01	0.97	18	3.70E-05	19000
1008CS-220	22	0.04	0.15	21	3.30E-05	21000
1008CS-270	20	0.01	0.25	26.5	3.90E-05	18500
1008CS-330	21	0.01	0.145	32	5.00E-05	14000
1008CS-390	25	0.01	0.185	39	5.60E-05	12400
1008CS-470	21	0.01	0.145	46	7.00E-05	10200
1008CS-560	20	0.01	0.209	54	7.50E-05	9300
1008CS-680	16	0.01	0.159	66.5	7.20E-05	9500
1008CS-820	20	0.01	0.23	81	1.10E-04	6300
1008CS-101	15	0.01	0.17	95	1.35E-04	5200
1008CS-121	27	0.01	0.16	115	1.60E-04	4400
1008CS-151	25	0.01	0.17	147	1.85E-04	3800
1008CS-181	20	0.01	0.165	175	2.50E-04	2700
1008CS-221	40	0.01	0.16	220	2.70E-04	2600
1008CS-271	40	0.01	0.135	260	3.30E-04	2100
1008CS-331	25	0.01	0.158	330	3.80E-04	1850
1008CS-391	45	0.01	0.1815	375	4.10E-04	1700
1008CS-471	50	0.01	0.175	470	5.30E-04	1300
1008CS-561	50	0.01	0.2	560	6.90E-04	1000
1008CS-621	80	0.01	0.167	620	7.00E-04	1000
1008CS-681	50	0.01	0.17	670	7.80E-04	900
1008CS-751	45	0.01	0.179	750	9.50E-04	740
1008CS-821	35	0.01	0.187	820	1.05E-03	680
1008CS-911	50	0.01	0.177	925	1.10E-03	640
1008CS-102	80	0.01	0.217	1000	1.20E-03	590
1008CS-122	85	0.01	0.216	1200	1.30E-03	520
1008CS-152	85	0.01	0.3	1500	1.70E-03	410
1008CS-182	90	0.01	0.29	1800	2.20E-03	320
1008CS-222	80	0.01	0.36	2200	2.75E-03	280
1008CS-272	95	0.01	0.285	2700	3.40E-03	220
1008CS-332	155	0.01	0.4	3300	4.40E-03	160
1008CS-392	150	0.01	0.465	3900	4.80E-03	150
1008CS-472	90	0.01	0.45	4700	5.90E-03	120
1008CS-562						
1008CS-682						
1008CS-822						

1008HQ Series

Part number	R1	R2	C(pF)	L(nH)	k	H
1008HQ-3N0	6	0.001	0.001	3.4	8.00E-06	88500
1008HQ-4N1	11	0.001	0.01	4.4	8.90E-06	80500
1008HQ-7N8	16	0.001	0.015	8.4	1.35E-05	36800
1008HQ-10N	16	0.001	0.015	10.8	1.45E-05	33000
1008HQ-12N	6	0.035	0.13	12.8	1.25E-05	32000
1008HQ-18N	6	0.035	0.09	18.6	1.95E-05	23000
1008HQ-22N	6	0.035	0.17	22.2	1.90E-05	22300

1008HQ-33N	5	0.035	0.17	33	2.80E-05	17000
1008HQ-39N	7.5	0.08	0.25	39	2.90E-05	14000
1008HQ-47N	7.5	0.08	0.18	47	3.50E-05	12200
1008HQ-56N	8	0.08	0.217	56	3.90E-05	10800
1008HQ-68N	9	0.1	0.185	68	5.10E-05	8600
1008HQ-82N	9	0.1	0.19	82	5.10E-05	8700
1008HQ-R10	13	0.1	0.259	100	7.10E-05	5800

1008CT Series

Part number	R1	R2	C(pF)	L(nH)	k	H
1008CT-040	1	0.15	0.03	4	2.10E-05	32700
1008CT-080	6	0.15	0.08	7.5	2.70E-05	25300
1008CT-150	5	0.1	0.11	14	3.70E-05	4650
1008CT-200	11	0.15	0.15	18.5	3.60E-05	18900
1008CT-300	12	0.09	0.11	26	6.50E-05	10700
1008CT-400	8	0.85	0.14	33	1.00E-04	6400
1008CT-500	52	0.8	0.09	52	9.00E-05	7300
1008CT-600	16	0.15	0.115	54	1.00E-04	6920
1008CT-700	27	0.2	0.097	68	1.30E-04	5320
1008CT-800	14	0.7	0.12	80	1.50E-04	4430
1008CT-900	15	0.1	0.105	90	1.60E-04	4350
1008CT-101	35	0.12	0.12	100	1.50E-04	4650

1008HT Series

Part number	R1	R2	C(pF)	L(nH)	k	H
1008HT-3N3	15	0.001	0.2	3	1.00E-05	70000
1008HT-6N8	30	0.01	0.08	6.6	2.00E-05	35000
1008HT-7N2	30	0.1	0.08	7.2	2.00E-05	34500
1008HT-12N	36	0.07	0.11	11.5	2.00E-05	35100
1008HT-15N	40	0.01	0.1	15	2.80E-05	24300
1008HT-18N	44	0.01	0.1	17.3	3.30E-05	21400
1008HT-22N	51	0.001	0.105	22	3.65E-05	19200
1008HT-27N	52	0.001	0.093	27	4.60E-05	15300
1008HT-33N	30	0.001	0.14	34	5.60E-05	12600
1008HT-39N	30	0.001	0.13	39	5.90E-05	12100
1008HT-47N	25	0.001	0.175	47	8.20E-05	8900
1008HT-56N	35	0.001	0.135	56	8.60E-05	8100
1008HT-68N	35	0.001	0.126	67.5	1.00E-04	7000
1008HT-82N	35	0.001	0.115	82	1.25E-04	5700
1008HT-R10	38	0.001	0.123	100	1.60E-04	4500
1008HT-R12	45	0.001	0.114	120	1.75E-04	4000
1008HT-R14	45	0.001	0.12	140	2.10E-04	3400
1008HT-R15	45	0.001	0.125	150	2.25E-04	3000
1008HT-R18	50	0.001	0.106	180	2.80E-04	2500
1008HT-R22	50	0.001	0.122	220	3.20E-04	2200
1008HT-R24	40	0.001	0.123	240	3.55E-04	1960
1008HT-R27	30	0.001	0.123	270	4.10E-04	1700
1008HT-R33	42	0.001	0.125	330	5.00E-04	1400
1008HT-R39	50	0.001	0.135	390	5.70E-04	1240
1008HT-R47	52	0.001	0.136	470	7.10E-04	980
1008HT-R56	38	0.001	0.123	560	8.50E-04	820



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1008LS Series

Part number	R1	R2	C(pF)	L(nH)	k	H
1008LS-122	280	0.001	0.22	1180	1.15E-03	610
1008LS-152	280	0.001	0.27	1500	1.35E-03	510
1008LS-182	310	0.001	0.23	1800	1.50E-03	470
1008LS-222	300	0.001	0.23	2200	1.70E-03	420
1008LS-272	325	0.001	0.23	2700	2.10E-03	340
1008LS-332	325	0.001	0.31	3300	2.60E-03	270
1008LS-392	325	0.001	0.35	3900	3.20E-03	220
1008LS-472	325	0.001	0.36	4700	3.90E-03	180
1008LS-562	325	0.001	0.385	5600	4.40E-03	160
1008LS-682	325	0.001	0.393	6800	5.60E-03	125
1008LS-822	325	0.001	0.39	8200	6.30E-03	110
1008LS-103	325	0.001	0.35	10000	7.40E-03	95

1206CS Series

Part number	R1	R2	C(pF)	L(nH)	k	H
1206CS-030	20	0.15	0.2	3.3	1.25E-05	54000
1206CS-060	10	0.65	0.15	6.4	1.40E-05	41000
1206CS-100	10	0.5	0.17	10	1.45E-05	38000
1206CS-120	11	0.25	0.22	12	1.60E-05	40100
1206CS-150	12	0.2	0.17	15	2.30E-05	29000
1206CS-180	12	0.27	0.17	18	3.40E-05	19800
1206CS-220	18	0.6	0.16	22	4.00E-05	16000
1206CS-270	25	0.2	0.14	27	3.50E-05	19300
1206CS-330	25	0.1	0.17	33	5.00E-05	14000
1206CS-390	45	0.1	0.11	39	5.10E-05	13800
1206CS-470	45	0.1	0.14	47	6.00E-05	11600
1206CS-560	53	0.13	0.125	56	7.30E-05	9600
1206CS-680	50	0.17	0.147	68	9.00E-05	7700
1206CS-820	48	0.12	0.13	82	9.30E-05	7500
1206CS-101	52	0.1	0.12	100	1.15E-04	6100
1206CS-121	52	0.1	0.105	120	1.50E-04	4700
1206CS-151	55	0.1	0.124	150	1.90E-04	3700
1206CS-181	65	0.2	0.104	180	2.10E-04	3300
1206CS-221	60	0.1	0.12	228	2.70E-04	2600
1206CS-271	60	0.1	0.12	270	3.30E-04	2100
1206CS-331	50	0.01	0.12	330	4.15E-04	1700
1206CS-391	50	0.001	0.11	390	4.90E-04	1430
1206CS-471	50	0.001	0.11	470	6.00E-04	1170
1206CS-561	50	0.001	0.11	560	7.40E-04	950
1206CS-621	60	0.01	0.1	620	7.80E-04	897
1206CS-681	50	0.001	0.11	680	8.00E-04	870
1206CS-751	80	0.006	0.087	750	8.60E-04	812
1206CS-821	50	0.001	0.1	820	1.10E-03	640
1206CS-911	60	57	0.09	910	9.00E-07	410
1206CS-102	50	0.001	0.1	1000	1.20E-03	580
1206CS-122	50	0.001	0.1	1200	1.50E-03	460

1812CS Series

Part number	R1	R2	C(pF)	L(nH)	k	H
1812CS-102	150	0.01	0.13	1600	1.25E-03	560
1812CS-122	90	0.001	0.24	1200	8.20E-04	860
1812CS-152	90	0.001	0.24	1460	1.05E-03	670
1812CS-182	80	0.001	0.24	1800	1.15E-03	610
1812CS-222	100	0.001	0.24	2250	1.50E-03	470
1812CS-272	105	0.001	0.24	2650	1.70E-03	410
1812CS-332	115	0.001	0.24	3100	1.70E-03	410
1812CS-392	120	0.001	0.23	3900	2.20E-03	320
1812CS-472	150	0.001	0.23	4700	2.50E-03	280
1812CS-562	150	0.001	0.25	5700	3.30E-03	210
1812CS-682	200	0.001	0.27	6800	4.00E-03	175
1812CS-822	220	0.001	0.29	8200	4.80E-03	146
1812CS-103	240	0.001	0.29	10000	5.80E-03	120
1812CS-123	200	0.001	0.29	12000	7.00E-03	100
1812CS-153	200	0.001	0.4	15000	9.50E-03	74
1812CS-183	200	0.001	0.45	18000	1.10E-02	64
1812CS-223	200	0.001	0.44	21500	1.30E-02	53
1812CS-273	200	0.001	1.9	27000	1.30E-02	54
1812CS-333	200	0.001	1.1	33000	1.50E-02	46

1812LS Series

Part number	R1	R2	C(pF)	L(μH)	k	H
1812LS-123	200	0.001	0.35	12	7.00E-03	107
1812LS-153	200	0.001	0.37	15	9.00E-03	78
1812LS-183	200	0.001	0.44	18	1.00E-02	70
1812LS-223	250	0.001	0.41	22	1.20E-02	58
1812LS-273	300	0.001	0.53	27	1.20E-02	58
1812LS-333	200	0.001	0.53	34	1.50E-02	46
1812LS-393	200	0.001	0.79	39	1.60E-02	44
1812LS-473	200	0.001	0.91	48	1.60E-02	44
1812LS-563	300	0.001	1.7	56	1.70E-02	41
1812LS-683	300	0.001	1.8	68	2.30E-02	31
1812LS-823	300	0.001	2.1	82	2.30E-02	31
1812LS-104	300	0.001	2.1	100	2.50E-02	29
1812LS-124	350	0.001	1.37	120	3.10E-02	23
1812LS-154	350	0.001	1.17	135	3.50E-02	20.5
1812LS-184	370	0.001	1.37	185	4.10E-02	18
1812LS-224	390	0.001	2.6	220	5.00E-02	15
1812LS-274	440	0.001	1.5	272	5.70E-02	12.3
1812LS-334	480	0.001	1.75	330	7.20E-02	9.9
1812LS-394	480	0.001	2.55	390	7.50E-02	9.2
1812LS-474	520	0.001	4.2	470	9.80E-02	7.7
1812LS-564	520	0.001	5.2	560	9.80E-02	7.2
1812LS-684	400	0.001	8.2	680	1.30E-01	6.3
1812LS-824	350	0.001	7.1	820	1.40E-01	5.6
1812LS-105	350	0.001	6.9	1000	1.50E-01	4.8



Specifications subject to change without notice. Document 158-4 Revised 2/7/01

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Modeling Coilcraft RF Inductors

Micro Springs

Part number	R1	R2	C(pF)	L(nH)	k	H
0906-2	14	0.003	0.22	1.65	1.00E-06	700000
0906-3	18	0.003	0.12	2.55	2.70E-06	260000
0906-4	22	0.003	0.1	3.8	4.50E-06	158000
0906-5	35	0.003	0.085	5.3	6.50E-06	109000
1606-6	45	0.001	0.06	5.35	7.20E-06	98000
1606-7	55	0.001	0.055	7	1.00E-05	71000
1606-8	68	0.001	0.042	8	1.17E-05	60500
1606-9	70	0.001	0.045	9.2	1.51E-05	46500
1606-10	70	0.001	0.056	11.7	1.78E-05	40000

Mini Springs

Part number	R1	R2	C(pF)	L(nH)	k	H
A01T	8	0.001	0.23	2.6	1.00E-06	704000
A02T	8	0.001	0.17	4.5	2.00E-06	353000
A03T	8	0.001	0.14	7.6	5.50E-06	128000
A04T	8	0.001	0.15	11.4	9.50E-06	74000
A05T	14	0.001	0.2	18.4	1.33E-05	53000
B06T	14	0.001	0.15	16	1.28E-05	55000
B07T	14	0.001	0.16	21	1.35E-05	52000
B08T	23	0.001	0.14	28	1.70E-05	41500
B09T	23	0.001	0.14	35.5	2.60E-05	27000
B10T	12	0.001	0.235	43	2.70E-05	26000

Midi Springs

Part number	R1	R2	C(pF)	L(nH)	k	H
1812SMS-22	12	0.001	0.2	22	1.33E-05	53000
1812SMS-27	18	0.001	0.185	26.5	1.70E-05	42000
1812SMS-33	25	0.001	0.155	33	2.20E-05	32000
1812SMS-39	24	0.001	0.217	39	2.50E-05	28000
1812SMS-47	24	0.001	0.184	47	2.20E-05	32000
1812SMS-56	15	0.001	0.29	56	3.50E-05	20300
1812SMS-68	15	0.001	0.22	68	3.60E-05	19600
1812SMS-82	15	0.001	0.34	82	5.00E-05	14100
1812SMS-R10	20	0.001	0.26	100	6.40E-05	11000
1812SMS-R12	16	0.001	0.205	1200	6.60E-05	10800

Maxi Springs

Part number	R1	R2	C(pF)	L(nH)	k	H
132-09SM	2	0.001	0.393	90	3.30E-05	21300
132-10SM	2	0.001	0.38	110	3.20E-05	22100
132-11SM	2	0.001	0.385	130	4.20E-05	16800
132-12SM	2	0.001	0.39	169	7.00E-05	10300
132-13SM	3	0.001	0.34	200	6.00E-05	11800
132-14SM	3	0.001	0.33	222	9.50E-05	7400
132-15SM	4	0.001	0.38	246	9.00E-05	7850
132-16SM	4	0.001	0.355	307	1.20E-04	5900
132-17SM	4	0.001	0.375	380	1.50E-04	4700
132-18SM	4	0.001	0.4	422	1.75E-04	4050
132-19SM	4	0.001	0.31	491	1.85E-04	3800
132-20SM	5	0.001	0.34	538	2.00E-04	3550



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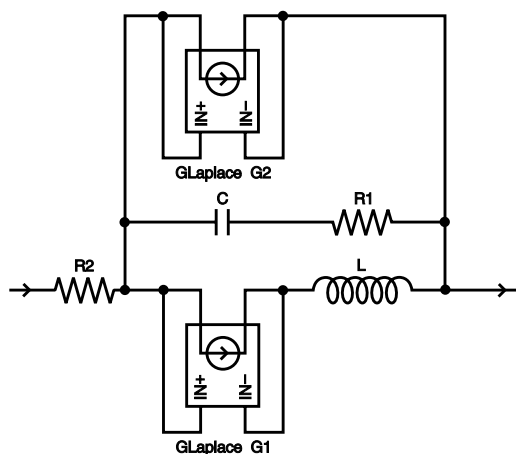
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Modeling Coilcraft Power Inductors

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.

Coilcraft

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Modeling Coilcraft Power Inductors

DO1606T Series

Part number	R1	R2	C(nF)	L(μ H)	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

LPO2506 Series

Part number	R1	R2	C(nF)	L(μ H)	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
LPT3305-473	20	1.3	6	47	4.00E-03	135	0	1.86E-01	2.17E-04	-2.10E-09	8.26E-15



Specifications subject to change without notice. Document 209-2 Revised 7/19/00

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Modeling Coilcraft Power Inductors

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

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



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Modeling Coilcraft Power Inductors

DT1608 Series

Part number	R1	R2	C(nF)	L(μ H)	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

DO1813HC Series

Part number	R1	R2	C(nF)	L(μ H)	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

DO3308 Series

Part number	R1	R2	C(nF)	L(μ H)	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(μ 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(μ 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



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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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