

DRGH

DIP POWER INDUCTOR



Applications

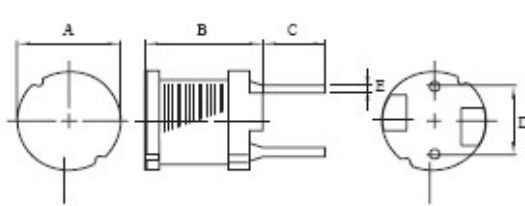
- Personal computers.
- Variety of battery power equipment.
- DC power supply circuits.

Features

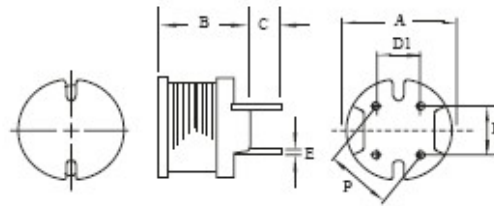
- Density design, small size, and low cost.
- Comparatively range rated current and high inductance.
- Low DCR and high dip stability.

Inductance and rated current ranges

- | | | |
|-----------|------------------|------------|
| ● DRGH654 | 22~1000 μ H | 0.90~0.13A |
| ● DRGH664 | 22~1000 μ H | 1.27~0.19A |
| ● DRGH855 | 10~10000 μ H | 2.50~0.08A |
| ● DRGH875 | 10~10000 μ H | 2.90~0.08A |
| ● DRGH895 | 10~47000 μ H | 2.60~0.04A |
| ● DRGH106 | 10~1000 μ H | 3.60~0.36A |
| ● DRGH108 | 10~1000 μ H | 4.50~0.45A |
| ● DRGH110 | 10~1000 μ H | 5.30~0.53A |



DRGH 654/664/855/875/895



DRGH 106/108/110

Unit: mm

Codes	A	B	C	D	D1	E	P
DRGH654	6.0±0.5	5.0 Max	4.0±1.0	4.0±0.3	-	0.50±0.1	-
DRGH664	6.0±0.5	6.5 Max	4.0±1.0	4.0±0.3	-	0.50±0.1	-
DRGH855	7.8±0.5	5.5 Max	5.0±1.0	5.0±0.3	-	0.70±0.1	-
DRGH875	7.8±0.5	7.5 Max	5.0±1.0	5.0±0.3	-	0.70±0.1	-
DRGH895	7.8±0.5	9.5 Max	5.0±1.0	5.0±0.3	-	0.70±0.1	-
DRGH106	10.0±0.5	6.0±0.5	3.5±1.0	5.0±0.3	4.0±0.3	0.70±0.1	6.40±0.5
DRGH108	10.0±0.5	8.0±0.5	3.5±1.0	5.0±0.3	4.0±0.3	0.70±0.1	6.40±0.5
DRGH110	10.0±0.5	10.0±0.5	3.5±1.0	5.0±0.3	4.0±0.3	0.70±0.1	6.40±0.5

Product Identification

DRGH 664 K B 100

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

(1)Type: Dip Choke Coils

(2)Type: core

(3) Inductance tolerance J=±5% K= ±10% M=±20%

(4) Package: bulk.

(5) Inductance: 100 for 10μH



Electrical Characteristics

DRGH 664 / 855 / 875 TYPE

Part No.	L1 (μH)	Test Freq. (@0.1V (KHz))	DC Resistance (Ω)Max				Rated DC Current (A) Max			
			654	664	855	875	654	664	855	875
100M	10	100	-	-	0.07	0.05	-	-	2.50	2.90
120M	12	100	-	-	0.08	0.06	-	-	2.40	2.50
150M	15	100	-	-	0.09	0.07	-	-	2.10	2.20
180M	18	100	-	-	0.10	0.08	-	-	2.00	1.90
220M	22	100	0.18	0.11	0.12	0.09	0.90	1.27	1.70	1.80
270M	27	100	0.21	0.14	0.14	0.11	0.81	1.14	1.60	1.70
330M	33	100	0.27	0.17	0.17	0.13	0.74	1.03	1.40	1.50
390M	39	100	0.29	0.19	0.21	0.14	0.68	0.95	1.30	1.30
470M	47	100	0.34	0.23	0.24	0.15	0.62	0.87	1.20	1.30
560M	56	100	0.42	0.26	0.31	0.18	0.57	0.80	1.10	1.20
680M	68	100	0.48	0.28	0.34	0.20	0.51	0.72	1.00	1.10
820M	82	100	0.55	0.39	0.40	0.24	0.47	0.66	0.93	1.00
101K	100	1	0.68	0.43	0.52	0.28	0.42	0.59	0.81	0.89
121K	120	1	0.77	0.54	0.59	0.36	0.39	0.54	0.76	0.81
151K	150	1	0.95	0.64	0.71	0.42	0.35	0.48	0.67	0.72
181K	180	1	1.15	0.74	0.89	0.57	0.32	0.44	0.62	0.66
221K	220	1	1.30	0.96	1.04	0.63	0.29	0.40	0.54	0.57
271K	270	1	1.55	1.12	1.28	0.88	0.26	0.36	0.49	0.51
331K	330	1	2.18	1.48	1.47	1.05	0.23	0.33	0.44	0.46
391K	390	1	2.47	1.66	1.67	1.17	0.21	0.30	0.41	0.44
471K	470	1	2.92	1.91	1.95	1.34	0.20	0.27	0.38	0.41
561K	560	1	3.97	2.31	2.83	1.72	0.18	0.25	0.35	0.36
681K	680	1	4.57	2.67	3.25	1.96	0.16	0.23	0.32	0.33
821K	820	1	5.28	3.10	3.82	2.56	0.15	0.21	0.31	0.30
102K	1000	1	7.06	4.45	5.28	2.94	0.13	0.19	0.25	0.27
122K	1200	1	-	-	6.03	4.04	-	-	0.23	0.24
152K	1500	1	-	-	7.15	4.70	-	-	0.21	0.22
182K	1800	1	-	-	8.26	5.05	-	-	0.20	0.20
222K	2200	1	-	-	11.1	6.25	-	-	0.18	0.18
272K	2700	1	-	-	13.1	8.72	-	-	0.16	0.16
332K	3300	1	-	-	15.9	10.6	-	-	0.14	0.15
392K	3900	1	-	-	18.0	14.2	-	-	0.13	0.14
472K	4700	1	-	-	23.9	16.7	-	-	0.12	0.12
562K	5600	1	-	-	26.8	18.7	-	-	0.11	0.11
682K	6800	1	-	-	31.7	21.8	-	-	0.098	0.10
822K	8200	1	-	-	46.5	28.7	-	-	0.088	0.093
103K	10000	1	-	-	55.7	33.0	-	-	0.081	0.084

1. Rated DC Current: The current when the inductance decrease to 90% of its initial value. (Ta=25°C)

2. Operating temperature range -30~100°C.



Electrical Characteristics
DRGH 895 / 106 / 108 / 110 TYPE

Part No.	L1 (μH)	Test Freq. @0.1V (KHz)	DC Resistance (Ω)Max				Rated DC Current (A) Max			
			895	106	108	110	895	106	108	110
100M	10	100	0.04	0.040	0.027	0.022	2.60	3.60	4.50	5.30
120M	12	100	0.04	0.044	0.031	0.023	2.60	3.30	4.10	4.90
150M	15	100	0.05	0.058	0.036	0.026	2.10	2.90	3.70	4.40
180M	18	100	0.05	0.064	0.049	0.033	2.00	2.70	3.40	4.00
220M	22	100	0.06	0.088	0.055	0.037	1.70	2.40	3.10	3.60
270M	27	100	0.06	0.100	0.062	0.048	1.60	2.20	2.80	3.30
330M	33	100	0.07	0.110	0.078	0.055	1.40	2.00	2.50	2.90
390M	39	100	0.08	0.140	0.087	0.073	1.40	1.80	2.30	2.70
470M	47	100	0.10	0.160	0.099	0.083	1.30	1.70	2.10	2.50
560M	56	100	0.11	0.190	0.130	0.092	1.20	1.50	1.90	2.30
680M	68	100	0.14	0.220	0.140	0.120	1.10	1.40	1.70	2.10
820M	82	100	0.16	0.290	0.160	0.140	1.00	1.30	1.60	1.90
101K	100	1	0.19	0.320	0.210	0.160	0.90	1.30	1.40	1.70
121K	120	1	0.22	0.380	0.240	0.200	0.82	1.20	1.30	1.50
151K	150	1	0.27	0.500	0.320	0.230	0.74	1.00	1.20	1.40
181K	180	1	0.31	0.560	0.350	0.310	0.71	0.84	1.10	1.30
221K	220	1	0.38	0.780	0.450	0.340	0.64	0.76	0.96	1.10
271K	270	1	0.53	0.920	0.610	0.400	0.57	0.69	0.87	1.00
331K	330	1	0.61	1.100	0.690	0.520	0.51	0.62	0.79	0.93
391K	390	1	0.69	1.300	0.780	0.650	0.48	0.57	0.72	0.86
471K	470	1	0.89	1.500	1.000	0.710	0.43	0.52	0.66	0.78
561K	560	1	1.01	1.900	1.200	1.000	0.40	0.48	0.60	0.71
681K	680	1	1.18	2.200	1.400	1.100	0.35	0.43	0.55	0.65
821K	820	1	1.57	2.600	1.800	1.300	0.32	0.40	0.50	0.59
102K	1000	1	1.84	3.200	2.100	1.700	0.30	0.36	0.45	0.53
122K	1200	1	2.10	-	-	-	0.27	-	-	-
152K	1500	1	2.80	-	-	-	0.23	-	-	-
182K	1800	1	3.21	-	-	-	0.21	-	-	-
222K	2200	1	4.21	-	-	-	0.19	-	-	-
272K	2700	1	4.94	-	-	-	0.17	-	-	-
332K	3300	1	6.16	-	-	-	0.15	-	-	-
392K	3900	1	6.84	-	-	-	0.14	-	-	-
472K	4700	1	7.89	-	-	-	0.13	-	-	-
562K	5600	1	11.50	-	-	-	0.12	-	-	-
682K	6800	1	13.20	-	-	-	0.11	-	-	-
822K	8200	1	15.20	-	-	-	0.10	-	-	-

1. Rated DC Current: The current when the inductance decrease to 90% of its initial value. (Ta=25°C)

Electrical Characteristics

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Part No.	L1 (μH)	Test Freq. @0.1V (KHz)	DC Resistance (Ω)Max				Rated DC Current (A) Max			
			895	106	108	110	895	106	108	110
103K	10000	1	22.00	-	-	-	0.089	-	-	-
123K	12000	1	25.00	-	-	-	0.073	-	-	-
153K	15000	1	29.10	-	-	-	0.068	-	-	-
183K	18000	1	38.90	-	-	-	0.066	-	-	-
223K	22000	1	44.90	-	-	-	0.059	-	-	-
273K	27000	1	55.70	-	-	-	0.052	-	-	-
333K	33000	1	64.20	-	-	-	0.048	-	-	-
393K	39000	1	74.20	-	-	-	0.042	-	-	-
473K	47000	1	96.40	-	-	-	0.038	-	-	-

1. Rated DC Current: The current when the inductance decrease to 90% of its initial value. (Ta=25°C)

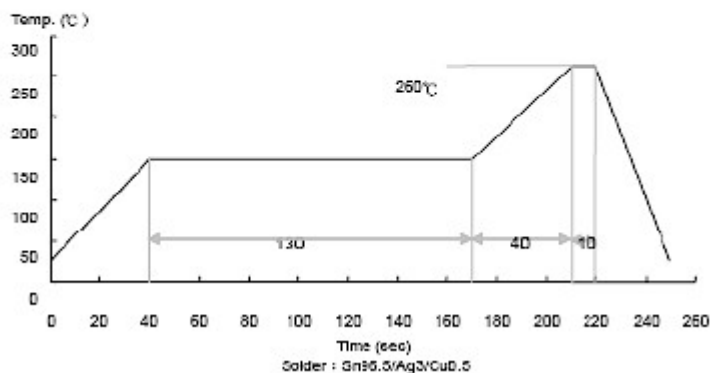
2. Operating temperature range -30~100°C.

Package

Series	Parts plate	Parts Per box
DRGH654	253/plate	1265/box
DRGH664	198/plate	990/box
DRGH855	209/plate	1045/box
DRGH875	176/plate	880/box
DRGH895	143/plate	715/box
DRGH106	220/plate	1100/box
DRGH108	176/plate	880/box
DRGH110	143/plate	715/box

IR-Reflow

Lead-free





Reliability of DIP Ferrite Wire Wound Power Inductor

Mechanical Performance

No	Item	Specification	Test Method
1-1-1	Vibration	Appearance: No damage L change: within±10% Q change: within±30% RDC: within specification	Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1min Amplitude: 1.5mm Time: 2hrs for each axis (X, Y & Z), total 6hrs
1-1-2	Resistance to Soldering Heat	Appearance: No Damage	Pre-heating: 150°C, 1Min. Solder Composition: Sn/Ag/Cu=95.6/3.0/0.5 Solder Temperature: 260±5°C Immersion Time: 4±1Sec.
1-1-3	Solderability	The electrodes shall be at least 90% covered with new solder coating	Pre-heating: 150°C, 1min Solder Composition: Sn/Ag/Cu=95.6/3.0/0.5 Solder Temperature: 245±5°C Immersion Time: 4±1sec

Environmental Performance

No	Item	Specification	Test Method															
1-2-1	Temperature Shock	Appearance: No damage L change: within±10% Q change: within±30% RDC: within specification	10 cycles (Air to Air) 1 cycles shall consist of: 30 minutes exposure to -55 °C 30 minutes exposure to 125 °C 15 seconds maximum transition between temperatures															
1-2-2	Temperature Cycle		One cycle:															
			<table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Time (min)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-25±3</td> <td>30</td> </tr> <tr> <td>2</td> <td>25±2</td> <td>3</td> </tr> <tr> <td>3</td> <td>85±3</td> <td>30</td> </tr> <tr> <td>4</td> <td>25±2</td> <td>3</td> </tr> </tbody> </table>	Step	Temperature (°C)	Time (min)	1	-25±3	30	2	25±2	3	3	85±3	30	4	25±2	3
			Step	Temperature (°C)	Time (min)													
			1	-25±3	30													
2	25±2	3																
3	85±3	30																
4	25±2	3																
Total: 100cycles Measured after exposure in the room condition for 24hrs																		
1-2-3	Humidity Resistance	Temperature: 40±2°C Relative Humidity: 90 ~ 95% Time: 1000hrs Measured after exposure in the room condition for 24hrs																
1-2-4	Heat Temperature Resistance	Temperature: 85±3°C Relative Humidity: 20% Applied Current: Rated Current Time: 1000hrs Measured after exposure in the room condition for 24hrs																
1-2-5	Low Temperature Resistance	Temperature: -25±3°C Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs																

* Storage Temperature : 25±3°C ; <80%RH