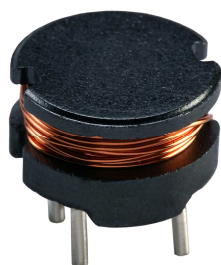
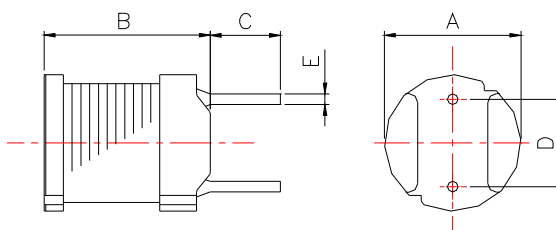


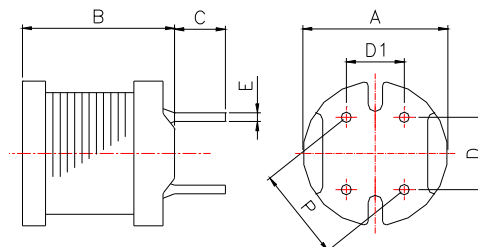
DIP Power Inductor



DRGH 654 / 664 / 855 / 875 / 895



DRGH 106 / 108 / 110



Dimensions

Unit: mm

Type	A	B max.	C	D	D1	E	P
DRGH654	6.0±0.5	5.0	4.0±1.0	4.0±0.3	—	0.50±0.1	—
DRGH664	6.0±0.5	6.5	4.0±1.0	4.0±0.3	—	0.50±0.1	—
DRGH855	7.8±0.5	5.5	5.0±1.0	5.0±0.3	—	0.65±0.1	—
DRGH875	7.8±0.5	7.5	5.0±1.0	5.0±0.3	—	0.65±0.1	—
DRGH895	7.8±0.5	9.5	5.0±1.0	5.0±0.3	—	0.65±0.1	—
DRGH106	10.0±0.5	6.5	3.5±1.0	5.0±0.3	4.0±0.3	0.80±0.1	6.40±0.5
DRGH108	10.0±0.5	8.5	3.5±1.0	5.0±0.3	4.0±0.3	0.65±0.1	6.40±0.5
DRGH110	10.0±0.5	10.5	3.5±1.0	5.0±0.3	4.0±0.3	0.70±0.1	6.40±0.5

Features

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

Applications

- Personal Computers
- Variety of Battery Power Equipment
- DC Power Supply Circuits

Characteristics

- Rated DC Current: The current when the inductance becomes 10% lower than its initial value. (Ta=25°C)
- Operating temperature range -40~125°C

Inductance and rated current ranges

— DRGH654	22~1000μH	0.90~0.13A
— DRGH664	22~1000μH	1.27~0.19A
— DRGH855	10~10000μH	2.50~0.081A
— DRGH875	10~10000μH	2.90~0.084A
— DRGH895	10~47000μH	2.60~0.038A
— DRGH106	10~1000μH	3.60~0.36A
— DRGH108	10~1000μH	4.50~0.45A
— DRGH110	10~1000μH	5.30~0.53A

— Test equipment:

L: HP4284A LCR meter

DCR: Milli-ohm meter

— Electrical specifications at 25°C

Product Identification

DRGH	664	K	B	100
Product Type	Dimensions (AxBxC)	Inductor Tolerance	Packaging Style	Inductance
	654: 6.0x5.0x4.0 664: 6.0x6.5x4.0 855: 7.8x5.5x5.0 875: 7.8x7.5x5.0 895: 7.8x9.5x5.0 106: 10x6.5x3.5 108: 10x8.5x3.5 110: 10x10.5x3.5	K: ±10% M: ±20%	B: Bulk	100: 10μH

DIP Power Inductor
Electrical Characteristics

DRGH654 / 664 / 855 / 875 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.				IDC (A) max.			
				654	664	855	875	654	664	855	875
100	10	M	1KHz, 0.1V	-	-	0.07	0.05	-	-	2.50	2.90
120	12	M	1KHz, 0.1V	-	-	0.08	0.06	-	-	2.40	2.50
150	15	M	1KHz, 0.1V	-	-	0.09	0.07	-	-	2.10	2.20
180	18	M	1KHz, 0.1V	-	-	0.10	0.08	-	-	2.00	1.90
220	22	M	1KHz, 0.1V	0.18	0.11	0.12	0.09	0.90	1.27	1.70	1.80
270	27	M	1KHz, 0.1V	0.21	0.14	0.14	0.11	0.81	1.14	1.60	1.70
330	33	M	1KHz, 0.1V	0.27	0.17	0.17	0.13	0.74	1.03	1.40	1.50
390	39	M	1KHz, 0.1V	0.29	0.19	0.21	0.14	0.68	0.95	1.30	1.30
470	47	M	1KHz, 0.1V	0.34	0.23	0.24	0.15	0.62	0.87	1.20	1.30
560	56	M	1KHz, 0.1V	0.42	0.26	0.31	0.18	0.57	0.80	1.10	1.20
680	68	M	1KHz, 0.1V	0.48	0.28	0.34	0.20	0.51	0.72	1.00	1.10
820	82	M	1KHz, 0.1V	0.55	0.39	0.40	0.24	0.47	0.66	0.93	1.00
101	100	K	1KHz, 0.1V	0.68	0.43	0.52	0.28	0.42	0.59	0.81	0.89
121	120	K	1KHz, 0.1V	0.77	0.54	0.59	0.36	0.39	0.54	0.76	0.81
151	150	K	1KHz, 0.1V	0.95	0.64	0.71	0.42	0.35	0.48	0.67	0.72
181	180	K	1KHz, 0.1V	1.15	0.74	0.89	0.57	0.32	0.44	0.62	0.66
221	220	K	1KHz, 0.1V	1.30	0.96	1.04	0.63	0.29	0.40	0.54	0.57
271	270	K	1KHz, 0.1V	1.55	1.12	1.28	0.88	0.26	0.36	0.49	0.51
331	330	K	1KHz, 0.1V	2.18	1.48	1.47	1.05	0.23	0.33	0.44	0.46
391	390	K	1KHz, 0.1V	2.47	1.66	1.67	1.17	0.21	0.30	0.41	0.44
471	470	K	1KHz, 0.1V	2.92	1.91	1.95	1.34	0.20	0.27	0.38	0.41
561	560	K	1KHz, 0.1V	3.97	2.31	2.83	1.72	0.18	0.25	0.35	0.36
681	680	K	1KHz, 0.1V	4.57	2.67	3.25	1.96	0.16	0.23	0.32	0.33
821	820	K	1KHz, 0.1V	5.28	3.10	3.82	2.56	0.15	0.21	0.31	0.30
102	1000	K	1KHz, 0.1V	7.06	4.45	5.28	2.94	0.13	0.19	0.25	0.27
122	1200	K	1KHz, 0.1V	-	-	6.03	4.04	-	-	0.23	0.24
152	1500	K	1KHz, 0.1V	-	-	7.15	4.70	-	-	0.21	0.22
182	1800	K	1KHz, 0.1V	-	-	8.26	5.05	-	-	0.20	0.20
222	2200	K	1KHz, 0.1V	-	-	11.1	6.25	-	-	0.18	0.18
272	2700	K	1KHz, 0.1V	-	-	13.1	8.72	-	-	0.16	0.16
332	3300	K	1KHz, 0.1V	-	-	15.9	10.6	-	-	0.14	0.15
392	3900	K	1KHz, 0.1V	-	-	18.0	14.2	-	-	0.13	0.14
472	4700	K	1KHz, 0.1V	-	-	23.9	16.7	-	-	0.12	0.12
562	5600	K	1KHz, 0.1V	-	-	26.8	18.7	-	-	0.11	0.11
682	6800	K	1KHz, 0.1V	-	-	31.7	21.8	-	-	0.098	0.10
822	8200	K	1KHz, 0.1V	-	-	46.5	28.7	-	-	0.088	0.093
103	10000	K	1KHz, 0.1V	-	-	55.7	33.0	-	-	0.081	0.084

DIP Power Inductor
Electrical Characteristics

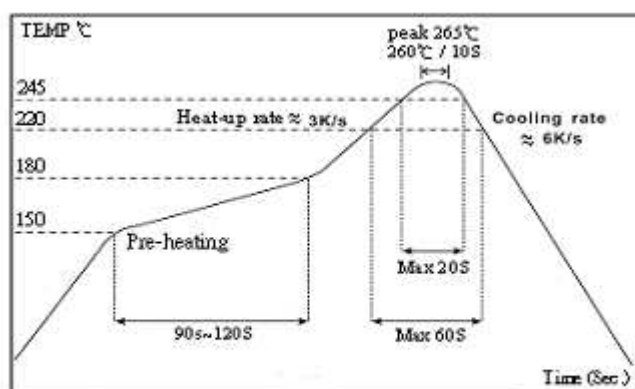
DRGH895 / 106 / 108 / 110 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.				IDC (A) max.			
				895	106	108	110	895	106	108	110
100	10	M	100KHz, 0.1V	0.04	0.040	0.027	0.022	2.60	3.60	4.50	5.30
120	12	M	100KHz, 0.1V	0.04	0.044	0.031	0.023	2.60	3.30	4.10	4.90
150	15	M	100KHz, 0.1V	0.05	0.058	0.036	0.026	2.10	2.90	3.70	4.40
180	18	M	100KHz, 0.1V	0.05	0.064	0.049	0.033	2.00	2.70	3.40	4.00
220	22	M	100KHz, 0.1V	0.06	0.088	0.055	0.037	1.70	2.40	3.10	3.60
270	27	M	100KHz, 0.1V	0.06	0.100	0.062	0.048	1.60	2.20	2.80	3.30
330	33	M	100KHz, 0.1V	0.07	0.110	0.078	0.055	1.40	2.00	2.50	2.90
390	39	M	100KHz, 0.1V	0.08	0.140	0.087	0.073	1.40	1.80	2.30	2.70
470	47	M	100KHz, 0.1V	0.10	0.160	0.099	0.083	1.30	1.70	2.10	2.50
560	56	M	100KHz, 0.1V	0.11	0.190	0.130	0.092	1.20	1.50	1.90	2.30
680	68	M	100KHz, 0.1V	0.14	0.220	0.140	0.120	1.10	1.40	1.70	2.10
820	82	M	100KHz, 0.1V	0.16	0.290	0.160	0.140	1.00	1.30	1.60	1.90
101	100	K	1KHz, 0.1V	0.19	0.320	0.210	0.160	0.90	1.30	1.40	1.70
121	120	K	1KHz, 0.1V	0.22	0.380	0.240	0.200	0.82	1.20	1.30	1.50
151	150	K	1KHz, 0.1V	0.27	0.500	0.320	0.230	0.74	1.00	1.20	1.40
181	180	K	1KHz, 0.1V	0.31	0.560	0.350	0.310	0.71	0.84	1.10	1.30
221	220	K	1KHz, 0.1V	0.38	0.780	0.450	0.340	0.64	0.76	0.96	1.10
271	270	K	1KHz, 0.1V	0.53	0.920	0.610	0.400	0.57	0.69	0.87	1.00
331	330	K	1KHz, 0.1V	0.61	1.100	0.690	0.520	0.51	0.62	0.79	0.93
391	390	K	1KHz, 0.1V	0.69	1.300	0.780	0.650	0.48	0.57	0.72	0.86
471	470	K	1KHz, 0.1V	0.89	1.500	1.000	0.710	0.43	0.52	0.66	0.78
561	560	K	1KHz, 0.1V	1.01	1.900	1.200	1.000	0.40	0.48	0.60	0.71
681	680	K	1KHz, 0.1V	1.18	2.200	1.400	1.100	0.35	0.43	0.55	0.65
821	820	K	1KHz, 0.1V	1.57	2.600	1.800	1.300	0.32	0.40	0.50	0.59
102	1000	K	1KHz, 0.1V	1.84	3.200	2.100	1.800	0.30	0.36	0.45	0.53
122	1200	K	1KHz, 0.1V	2.10	-	-	-	0.27	-	-	-
152	1500	K	1KHz, 0.1V	2.80	-	-	-	0.23	-	-	-
182	1800	K	1KHz, 0.1V	3.21	-	-	-	0.21	-	-	-
222	2200	K	1KHz, 0.1V	4.21	-	-	-	0.19	-	-	-
272	2700	K	1KHz, 0.1V	4.94	-	-	-	0.17	-	-	-
332	3300	K	1KHz, 0.1V	6.16	-	-	-	0.15	-	-	-
392	3900	K	1KHz, 0.1V	6.84	-	-	-	0.14	-	-	-
472	4700	K	1KHz, 0.1V	7.89	-	-	-	0.13	-	-	-
562	5600	K	1KHz, 0.1V	11.50	-	-	-	0.12	-	-	-
682	6800	K	1KHz, 0.1V	13.20	-	-	-	0.11	-	-	-
822	8200	K	1KHz, 0.1V	15.20	-	-	-	0.10	-	-	-
103	10000	K	1KHz, 0.1V	22.00	-	-	-	0.089	-	-	-
123	12000	K	1KHz, 0.1V	25.00	-	-	-	0.073	-	-	-
153	15000	K	1KHz, 0.1V	29.10	-	-	-	0.068	-	-	-
183	18000	K	1KHz, 0.1V	38.90	-	-	-	0.066	-	-	-
223	22000	K	1KHz, 0.1V	44.90	-	-	-	0.059	-	-	-
273	27000	K	1KHz, 0.1V	55.70	-	-	-	0.052	-	-	-
333	33000	K	1KHz, 0.1V	64.20	-	-	-	0.048	-	-	-
393	39000	K	1KHz, 0.1V	74.20	-	-	-	0.042	-	-	-
473	47000	K	1KHz, 0.1V	96.40	-	-	-	0.038	-	-	-

■ Package

Type	Parts plate	Parts Per bind
DRGH654	200	2400
DRGH664	200	2400
DRGH855	200	2400
DRGH875	200	2400
DRGH895	200	2400
DRGH106	144	1296
DRGH108	144	1296
DRGH110	144	1296

■ IR-Reflow



DIP Power Inductor

■ Reliability of DIP Ferrite Wire Wound Power Inductor

Mechanical Performance

Item	Specification	Test Method
Vibration	Appearance: No damage L change: within±10% 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
Resistance to Soldering Heat	Appearance: No Damage	Pre-heating: 150℃, 1Min. Solder Composition: Sn/Ag/Cu=95.6/3.0/0.5 Solder Temperature: 260±5℃ Immersion Time: 4±1Sec.
Solderability	The electrodes shall be at least 90% covered with new solder coating	Pre-heating: 150℃, 1min Solder Composition: Sn/Ag/Cu=95.6/3.0/0.5 Solder Temperature: 245±5℃ Immersion Time: 4±1sec

Environmental Performance

Item	Specification	Test Method		
Temperature Shock	Appearance: No damage L change: within±10% 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		
Temperature Cycle		One cycle:		
		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		
Humidity Resistance	Temperature: 40±2°C Relative Humidity: 90 ~ 95% Time: 1000hrs Measured after exposure in the room condition for 24hrs			
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			
Low Temperature Resistance	Temperature: -25±3°C Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs			

■ Storage Temperature :15~28℃;<80%RH