

## Data Sheet

**Customer:**

**Product:** DIP Power Inductor—DRGR Series

**Sizes.:** 664/875/108/110

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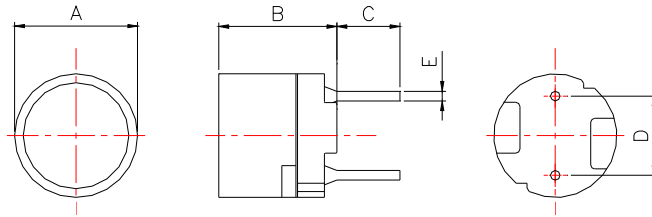
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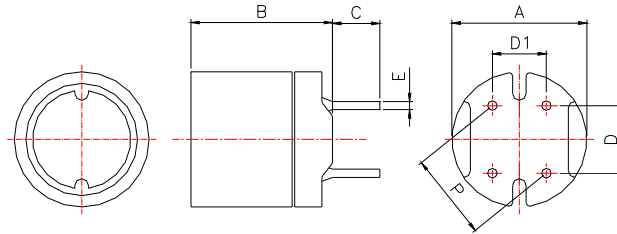
## DIP Power Inductor



**DRGR 664 / 875**



**DRGR 108 / 110**



### ■ Dimensions

Unit: mm

Type	A	B	C	D	D1	E	P
DRGR664	6.0±0.5	6.5 max.	4.0±1.0	4.0±0.3	–	0.50±0.1	–
DRGR875	7.8±0.5	7.5 max.	5.0±1.0	5.0±0.3	–	0.65±0.1	–
DRGR108	10.5±0.5	8.0 max.	3.5±1.0	5.0±0.3	4.0±0.3	0.80±0.1	6.40±0.5
DRGR110	10.5±0.5	10.5±0.5	3.5±1.0	5.0±0.3	4.0±0.3	0.80±0.1	6.40±0.5

### ■ Features

- Magnetically shielded & DIP type
- Comparatively range rated current and high inductance
- Low radiation and high dip stability

### ■ Inductance and rated current ranges

- DRGR664      22~1000μH    0.96~0.14A
- DRGR875      22~10000μH    1.60~0.074A
- DRGR108      10~1000μH    2.80~0.28A
- DRGR110      10~1000μH    3.51~0.35A

– Test equipment:

L&Q: HP4284A LCR meter

DCR: Milli-ohm meter

– Electrical specifications at 25°C

### ■ 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

### ■ Product Identification

<b>DRGR</b>	<b>664</b>	<b>K</b>	<b>B</b>	<b>100</b>
Product Type	Dimensions (AxBxC)	Inductor Tolerance	Packaging Style	Inductance
	664: 6.0x6.5x4.0 875: 7.8x7.5x5.0 108: 10.5x8.0x3.5 110: 10.5x10.5x3.5	K: ±10% M: ±20%	B: Bulk	100: 10μH

**Electrical Characteristics**

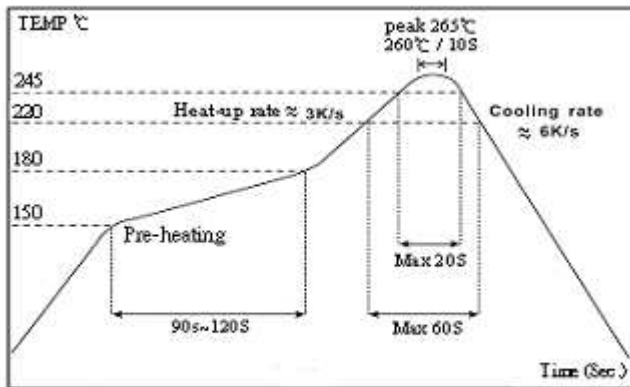
DRGR664 / 875 / 108 / 110 Type

Codes	L ( $\mu$ H)	Tolerance	Test Condition	DCR ( $\Omega$ ) max.				IDC (A) max.			
				664	875	108	110	664	875	108	110
100	10	M	100KHz, 0.1V	-	-	0.05	0.023	-	-	2.80	3.51
120	12	M	100KHz, 0.1V	-	-	0.06	0.024	-	-	2.50	3.24
150	15	M	100KHz, 0.1V	-	-	0.07	0.036	-	-	2.30	2.88
180	18	M	100KHz, 0.1V	-	-	0.08	0.039	-	-	2.10	2.61
220	22	M	100KHz, 0.1V	0.13	0.08	0.09	0.042	0.96	1.60	2.00	2.34
270	27	M	100KHz, 0.1V	0.18	0.10	0.10	0.045	0.87	1.40	1.76	2.16
330	33	M	100KHz, 0.1V	0.21	0.14	0.11	0.057	0.78	1.30	1.60	1.89
390	39	M	100KHz, 0.1V	0.26	0.15	0.12	0.076	0.72	1.20	1.38	1.80
470	47	M	100KHz, 0.1V	0.29	0.17	0.14	0.100	0.66	1.10	1.28	1.62
560	56	M	100KHz, 0.1V	0.33	0.19	0.15	0.110	0.60	0.99	1.20	1.44
680	68	M	100KHz, 0.1V	0.36	0.21	0.16	0.150	0.55	0.89	1.00	1.35
820	82	M	100KHz, 0.1V	0.39	0.27	0.18	0.160	0.50	0.81	0.96	1.26
101	100	K	1KHz, 0.1V	0.54	0.32	0.20	0.190	0.45	0.74	0.92	1.08
121	120	K	1KHz, 0.1V	0.62	0.36	0.24	0.210	0.41	0.67	0.80	0.99
151	150	K	1KHz, 0.1V	0.72	0.51	0.35	0.230	0.37	0.60	0.73	0.90
181	180	K	1KHz, 0.1V	0.88	0.57	0.40	0.260	0.34	0.55	0.64	0.82
221	220	K	1KHz, 0.1V	0.99	0.76	0.54	0.290	0.30	0.50	0.61	0.74
271	270	K	1KHz, 0.1V	1.52	0.86	0.76	0.360	0.27	0.45	0.56	0.67
331	330	K	1KHz, 0.1V	1.69	0.97	0.86	0.510	0.25	0.41	0.50	0.61
391	390	K	1KHz, 0.1V	1.85	1.28	0.93	0.690	0.23	0.37	0.44	0.55
471	470	K	1KHz, 0.1V	2.85	1.44	1.23	0.980	0.21	0.34	0.41	0.51
561	560	K	1KHz, 0.1V	3.21	1.61	1.34	1.100	0.19	0.31	0.38	0.46
681	680	K	1KHz, 0.1V	3.60	2.07	1.53	1.200	0.17	0.28	0.34	0.42
821	820	K	1KHz, 0.1V	4.87	2.33	2.10	1.300	0.16	0.26	0.32	0.38
102	1000	K	1KHz, 0.1V	5.56	2.72	2.30	1.500	0.14	0.23	0.28	0.35
122	1200	K	1KHz, 0.1V	-	3.98	-	-	-	0.21	-	-
152	1500	K	1KHz, 0.1V	-	4.50	-	-	-	0.19	-	-
182	1800	K	1KHz, 0.1V	-	6.81	-	-	-	0.17	-	-
222	2200	K	1KHz, 0.1V	-	7.56	-	-	-	0.16	-	-
272	2700	K	1KHz, 0.1V	-	8.54	-	-	-	0.14	-	-
332	3300	K	1KHz, 0.1V	-	9.74	-	-	-	0.13	-	-
392	3900	K	1KHz, 0.1V	-	12.90	-	-	-	0.12	-	-
472	4700	K	1KHz, 0.1V	-	14.70	-	-	-	0.11	-	-
562	5600	K	1KHz, 0.1V	-	20.40	-	-	-	0.099	-	-
682	6800	K	1KHz, 0.1V	-	23.00	-	-	-	0.089	-	-
822	8200	K	1KHz, 0.1V	-	30.60	-	-	-	0.081	-	-
103	10000	K	1KHz, 0.1V	-	35.00	-	-	-	0.074	-	-

**■ Package**

Type	Parts plate	Parts Per box / bind
DRGR664	120/plate	600/box
DRGR875	200/plate	2400/bind
DRGR108	120/plate	600/box
DRGR110	120/plate	600/box

**■ 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 ℃ 30 minutes exposure to 125 ℃ 15 seconds maximum transition between temperatures		
Temperature Cycle		One cycle:		
		Step	Temperature (℃)	Time (min)
		1	-25±3	30
		2	25±2	3
		3	30	
		4	25±2	3
		Total: 100cycles Measured after exposure in the room condition for 24hrs		
Humidity Resistance		Temperature: 40±2℃ Relative Humidity: 90 ~ 95% Time: 1000hrs Measured after exposure in the room condition for 24hrs		
Heat Temperature Resistance		Temperature: 85±3℃ Relative Humidity: 20% Applied Current: Rated Current Time: 1000hrs Measured after exposure in the room condition for 24hrs		
Low Temperature Resistance		Temperature: -25±3℃ Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs		

■ Storage Temperature :25±3℃;<80%RH