

Data Sheet

Customer:

Product: DIP Power Inductor—DRGR Series

Sizes.: 664/875/110

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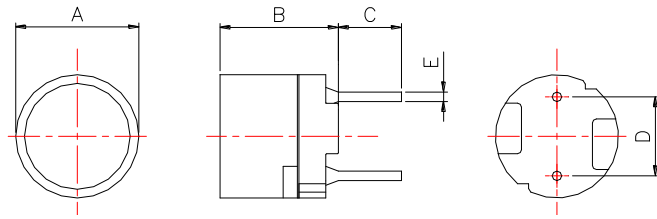
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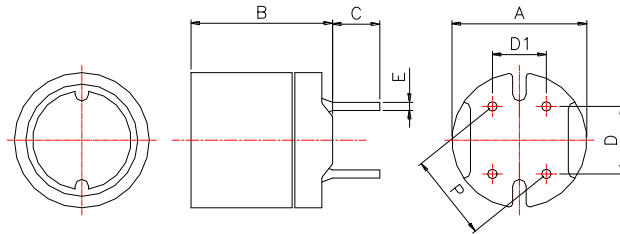
DIP Power Inductor



DRGR 664 / 875



DRGR 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	-
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
- 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

DRGR	664	M	B	100
Product Type	Dimensions (AxBxC)	Inductor Tolerance	Packaging Style	Inductance
	664: 6.0x6.5x4.0 875: 7.8x7.5x5.0 110: 10.5x10.5x3.5	M: ±20%	B: Bulk	100: 10μH 101: 100μH 102: 1000μH

DIP Power Inductor

Electrical Characteristics

DRGR664 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) max	IDC (A) max.
DRGR664□B220	22	M	100KHz, 0.1V	0.13	0.96
DRGR664□B270	27	M	100KHz, 0.1V	0.18	0.87
DRGR664□B330	33	M	100KHz, 0.1V	0.21	0.78
DRGR664□B390	39	M	100KHz, 0.1V	0.26	0.72
DRGR664□B470	47	M	100KHz, 0.1V	0.29	0.66
DRGR664□B560	56	M	100KHz, 0.1V	0.33	0.60
DRGR664□B680	68	M	100KHz, 0.1V	0.36	0.55
DRGR664□B820	82	M	100KHz, 0.1V	0.39	0.50
DRGR664□B101	100	M	1KHz, 0.1V	0.54	0.45
DRGR664□B121	120	M	1KHz, 0.1V	0.62	0.41
DRGR664□B151	150	M	1KHz, 0.1V	0.72	0.37
DRGR664□B181	180	M	1KHz, 0.1V	0.88	0.34
DRGR664□B221	220	M	1KHz, 0.1V	0.99	0.30
DRGR664□B271	270	M	1KHz, 0.1V	1.52	0.27
DRGR664□B331	330	M	1KHz, 0.1V	1.69	0.25
DRGR664□B391	390	M	1KHz, 0.1V	1.85	0.23
DRGR664□B471	470	M	1KHz, 0.1V	2.85	0.21
DRGR664□B561	560	M	1KHz, 0.1V	3.21	0.19
DRGR664□B681	680	M	1KHz, 0.1V	3.60	0.17
DRGR664□B821	820	M	1KHz, 0.1V	4.87	0.16
DRGR664□B102	1000	M	1KHz, 0.1V	5.56	0.14

DRGR875 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) max	IDC (A) max.
DRGR875□B220	22	M	100KHz, 0.1V	0.08	1.60
DRGR875□B270	27	M	100KHz, 0.1V	0.10	1.40
DRGR875□B330	33	M	100KHz, 0.1V	0.14	1.30
DRGR875□B390	39	M	100KHz, 0.1V	0.15	1.20
DRGR875□B470	47	M	100KHz, 0.1V	0.17	1.10
DRGR875□B470-1	47	K	1KHz, 0.1V	0.17	1.20
DRGR875□B560	56	M	100KHz, 0.1V	0.19	0.99
DRGR875□B680	68	M	100KHz, 0.1V	0.21	0.89
DRGR875□B820	82	M	100KHz, 0.1V	0.27	0.81
DRGR875□B101	100	M	1KHz, 0.1V	0.32	0.74
DRGR875□B121	120	M	1KHz, 0.1V	0.36	0.67
DRGR875□B151	150	M	1KHz, 0.1V	0.51	0.60
DRGR875□B181	180	M	1KHz, 0.1V	0.57	0.55
DRGR875□B221	220	M	1KHz, 0.1V	0.76	0.50
DRGR875□B271	270	M	1KHz, 0.1V	0.86	0.45
DRGR875□B331	330	M	1KHz, 0.1V	0.97	0.41
DRGR875□B331-1	330	K	1KHz, 0.1V	0.97	0.45
DRGR875□B391	390	M	1KHz, 0.1V	1.28	0.37
DRGR875□B471	470	M	1KHz, 0.1V	1.44	0.34
DRGR875□B561	560	M	1KHz, 0.1V	1.61	0.31
DRGR875□B681	680	M	1KHz, 0.1V	2.07	0.28
DRGR875□B821	820	M	1KHz, 0.1V	2.33	0.26
DRGR875□B102	1000	M	1KHz, 0.1V	2.72	0.23
DRGR875□B122	1200	M	1KHz, 0.1V	3.98	0.21
DRGR875□B152	1500	M	1KHz, 0.1V	4.50	0.19
DRGR875□B182	1800	M	1KHz, 0.1V	6.81	0.17
DRGR875□B222	2200	M	1KHz, 0.1V	7.56	0.16
DRGR875□B222-1	2200	K	1KHz, 0.1V	7.56	0.17
DRGR875□B272	2700	M	1KHz, 0.1V	8.54	0.14
DRGR875□B332	3300	M	1KHz, 0.1V	9.74	0.13
DRGR875□B392	3900	M	1KHz, 0.1V	12.90	0.12
DRGR875□B472	4700	M	1KHz, 0.1V	14.70	0.11
DRGR875□B562	5600	M	1KHz, 0.1V	20.40	0.099
DRGR875□B682	6800	M	1KHz, 0.1V	23.00	0.089
DRGR875□B822	8200	M	1KHz, 0.1V	30.60	0.081
DRGR875□B103	10000	M	1KHz, 0.1V	35.00	0.074

■Electrical Characteristics

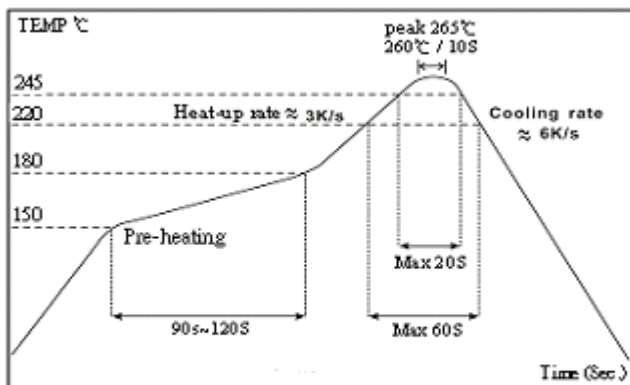
DRGR110 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) max	IDC (A) max.
DRGR110□B100	10	M	100KHz, 0.1V	0.023	3.51
DRGR110□B120	12	M	100KHz, 0.1V	0.024	3.24
DRGR110□B150	15	M	100KHz, 0.1V	0.036	2.88
DRGR110□B180	18	M	100KHz, 0.1V	0.039	2.61
DRGR110□B220	22	M	100KHz, 0.1V	0.042	2.34
DRGR110□B270	27	M	100KHz, 0.1V	0.045	2.16
DRGR110□B330	33	M	100KHz, 0.1V	0.057	1.89
DRGR110□B390	39	M	100KHz, 0.1V	0.076	1.80
DRGR110□B470	47	M	100KHz, 0.1V	0.100	1.62
DRGR110□B560	56	M	100KHz, 0.1V	0.110	1.44
DRGR110□B680	68	M	100KHz, 0.1V	0.150	1.35
DRGR110□B820	82	M	100KHz, 0.1V	0.160	1.26
DRGR110□B101	100	M	1KHz, 0.1V	0.190	1.08
DRGR110□B121	120	M	1KHz, 0.1V	0.210	0.99
DRGR110□B151	150	M	1KHz, 0.1V	0.230	0.90
DRGR110□B181	180	M	1KHz, 0.1V	0.260	0.82
DRGR110□B221	220	M	1KHz, 0.1V	0.290	0.74
DRGR110□B271	270	M	1KHz, 0.1V	0.360	0.67
DRGR110□B331	330	M	1KHz, 0.1V	0.510	0.61
DRGR110□B391	390	M	1KHz, 0.1V	0.690	0.55
DRGR110□B471	470	M	1KHz, 0.1V	0.980	0.51
DRGR110□B561	560	M	1KHz, 0.1V	1.100	0.46
DRGR110□B681	680	M	1KHz, 0.1V	1.200	0.42
DRGR110□B821	820	M	1KHz, 0.1V	1.300	0.38
DRGR110□B102	1000	M	1KHz, 0.1V	1.500	0.35

■Package

Type	Parts plate	Parts Per bind
DRGR664	200	2400
DRGR875	200	2400
DRGR110	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°C,1Min. Solder Composition: Sn/Ag/Cu=95.6/3.0/0.5 Solder Temperature: 260±5°C Immersion Time: 4±1Sec.
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

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:															
		<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																	
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°C ;<80%RH