

FDRH series (Rev. 4.0)



Features

- * RoHS compliant
- * Available in magnetic shielding
- * Low DC resistance
- * Suitable for large currents
- * Ideal for DC-DC converter inductor applications
- * Available on tape and reel for automatic surface mounting

Product Identification

FDRH **74** - **6R8**

1 2 3

1. Product Code
2. Size Code: 7.3 * 7.3 * 4.5mm
3. Inductance: 6.8uH

Applications

- * DC/DC converters, etc
- * Power supply for VTRs
- * OA equipment
- * LCD televisions
- * Notebook PCs
- * Portable communication devices

Operating & Storage Condition :

- * Operating Temp :Stand Type:-40 to +85 ℃
- * Storage Temp : Stand Type -40 to +85 ℃
- * Storage Life Time :12 months @25 ℃, RH 65%

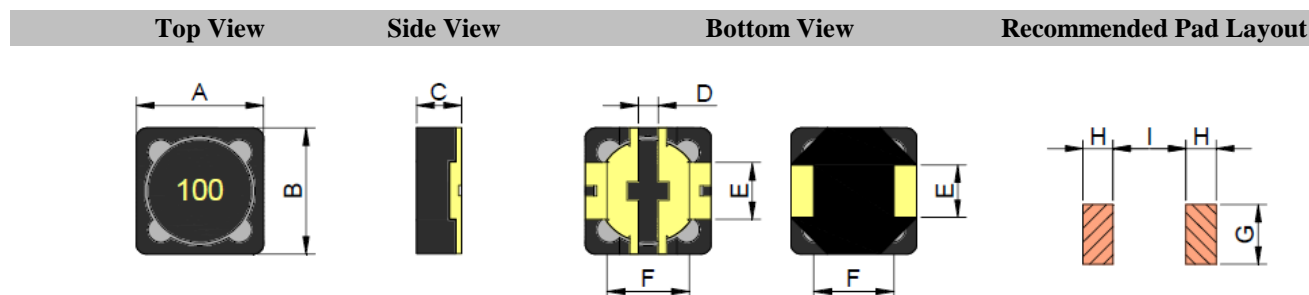
Test Equipment :

- * HP4284A,HP42841A-L,IDC,Q,RDC
- * HP8753D NETWORK ANALYZER-SRF

Standard Atmospheric Conditions :

- * Ambient Temp : 20+/-15 ℃
- * Relative Humidity : 65+/-20%

Dimension & Recommended Pad Layout: [mm]



Size Code	A(±0.5)	B(±0.5)	C(max.)	D(ref.)	E(±0.5)	F(±0.2)	G(ref.)	H(ref.)	I(ref.)
FDRH62	6.3	6.3	3.0	1.0	1.5	4.6	1.9	1.3	4.2
FDRH64	6.3	6.3	5.0	1.0	1.5	4.6	1.9	1.3	4.2
FDRH73	7.3	7.3	3.5	1.3	2.0	4.8	2.4	1.7	4.4
FDRH74	7.3	7.3	4.5	1.3	2.0	4.8	2.4	1.7	4.4
FDRH124	12.0	12.0	5.0	1.5	5.0	7.6	5.6	2.8	7.0
FDRH125	12.0	12.0	6.0	1.5	5.0	7.6	5.6	2.8	7.0
FDRH127	12.0	12.0	8.0	1.5	5.0	7.6	5.6	2.8	7.0
FDRH129	12.0	12.0	10.0	1.5	5.0	7.6	5.6	2.8	7.0

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Electrical Characteristics

L Code	Inductance (uH)	DCR (Ω) max./ Rated Current (A) max.							
		FDRH 62		FDRH 64		FDRH 73		FDRH 74	
1R2	1.2								
1R5	1.5					18m	3.40		
1R8	1.8							18m	5.50
2R2	2.2							24m	4.00
3R3	3.3	68m	1.94	30m	2.20	34m	3.50	30m	3.60
3R5	3.5								
3R9	3.9								
4R7	4.7	80m	1.63	40m	1.80			44m	2.70
5R6	5.6								
6R1	6.1								
6R8	6.8			0.09m	1.80			46m	2.40
7R6	7.6								
8R2	8.2							48m	2.00
100	10.0	0.15	1.10	0.12	1.35	72m	1.68	49m	1.84
120	12.0	0.20	1.00	0.13	1.20	98m	1.52	58m	1.71
150	15.0	0.23	0.90	0.18	1.10	0.13	1.33	81m	1.47
180	18.0	0.27	0.80	0.24	1.00	0.14	1.20	91m	1.31
220	22.0	0.34	0.74	0.27	0.91	0.19	1.07	0.11	1.23
270	27.0	0.38	0.66	0.30	0.82	0.21	0.96	0.15	1.12
330	33.0	0.45	0.59	0.33	0.75	0.24	0.91	0.17	0.96
390	39.0	0.49	0.54	0.37	0.69	0.32	0.77	0.23	0.91
470	47.0	0.69	0.50	0.52	0.62	0.36	0.76	0.26	0.88
560	56.0	0.78	0.46	0.56	0.58	0.47	0.68	0.35	0.75
680	68.0	1.07	0.42	0.63	0.52	0.52	0.61	0.38	0.69
820	82.0	1.21	0.38	0.71	0.47	0.69	0.57	0.43	0.61
101	100.0	1.39	0.34	1.03	0.43	0.79	0.50	0.61	0.60
121	120.0	1.90	0.31	1.15	0.39	0.89	0.49	0.66	0.52
151	150.0	2.18	0.28	1.68	0.35	1.27	0.43	0.88	0.46
181	180.0	2.77	0.26	1.87	0.32	1.45	0.39	0.98	0.42
221	220.0	3.12	0.23	2.08	0.29	1.65	0.35	1.17	0.36
271	270.0	4.38	0.22	2.37	0.26	2.31	0.32	1.64	0.34
331	330.0	4.94	0.19	2.67	0.23	2.62	0.28	1.86	0.32
391	390.0			2.94	0.22	2.94	0.26	2.85	0.29
471	470.0			3.39	0.20	4.18	0.24	3.01	0.26
561	560.0			5.43	0.18	4.67	0.22	3.62	0.23
681	680.0			7.32	0.17	5.73	0.19	4.63	0.22
821	820.0			8.24	0.15	6.54	0.18	5.20	0.20
102	1000.0			9.26	0.14	9.44	0.16	6.00	0.18

* Test Condition: 1.0~8.2 uH ($\pm 30\%$) @ 100KHz / 0.3V, 10uH and above ($\pm 20\%$) @ 1KHz / 0.3V* Rated Current: the current at which the inductance decreases by 25% from the initial value; or the current at which temperature rise is $\Delta T \leq 40^\circ\text{C}$ ($T_a = 20^\circ\text{C}$), whichever is smaller.

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L Code	Inductance (uH)	DCR (Ω) max./ Rated Current (A) max.							
		FDRH 124		FDRH 125		FDRH 127		FDRH 129	
1R0	1.0	8.0m	7.80	11.0m	8.50	6.5m	10.40	5.0m	16.00
1R5	1.5	11.0m	7.20	13.0m	7.50	7.0m	9.80	5.0m	15.10
2R2	2.2	13.0m	6.00	15.5m	6.50	11.5m	8.00	6.0m	13.20
2R4	2.4					11.5m	8.00		
3R3	3.3	21.0m	6.00	18.0m	5.70	13.5m	7.50	7.0m	11.90
3R5	3.5					13.5m	7.50		
3R9	3.9	21.0m	5.10						
4R7	4.7	22.0m	4.80	20.5m	4.70	15.8m	6.80	8.0m	10.80
5R6	5.6							10.0m	9.60
6R1	6.1					17.6m	6.60		
6R8	6.8	26.0m	4.20	25.0m	4.50	19.0m	6.60	12.0m	8.70
7R6	7.6					20.0m	5.90		
8R2	8.2	31.0m	4.00			20.0m	5.60		
100	10.0	39.0m	3.90	25.0m	4.00	21.6m	5.40	17.0m	8.00
120	12.0	44.0m	3.40	27.0m	3.50	24.3m	4.90		
150	15.0	55.0m	3.20	30.0m	3.30	27.0m	4.50	28.0m	7.00
180	18.0	65.0m	2.90	34.0m	3.00	39.2m	3.90		
220	22.0	75.0m	2.50	36.0m	2.80	43.2m	3.60	32.0m	5.60
270	27.0	86.0m	2.25	51.0m	2.30	45.9m	3.40		
330	33.0	0.112	2.00	57.0m	2.10	64.8m	3.00	51.0m	4.80
390	39.0	0.121	1.90	68.0m	2.00	72.9m	2.75		
470	47.0	0.160	1.80	75.0m	1.80	0.100	2.50	78.0m	3.90
560	56.0	0.190	1.70	0.110	1.70	0.110	2.35		
680	68.0	0.220	1.50	0.120	1.50	0.140	2.10	0.105	2.70
820	82.0	0.260	1.30	0.140	1.40	0.160	1.95		
101	100.0	0.308	1.20	0.160	1.30	0.220	1.70	0.150	2.10
121	120.0	0.380	1.10	0.170	1.10	0.250	1.60		
151	150.0	0.530	0.95	0.230	1.00	0.280	1.42		
181	180.0	0.620	0.85	0.290	0.90	0.350	1.30		
221	220.0	0.700	0.80	0.400	0.80	0.420	1.16		
271	270.0	0.870	0.60	0.460	0.75	0.560	1.06		
331	330.0	0.990	0.50	0.510	0.68	0.640	0.95		
391	390.0			0.690	0.65	0.700	0.88		
471	470.0			0.770	0.58	0.980	0.79		
561	560.0			0.860	0.54	1.070	0.73		
681	680.0			1.200	0.48	1.460	0.67		
821	820.0			1.340	0.43	1.640	0.60		
102	1000.0			1.530	0.40	1.820	0.55		

* Test Condition: 1.0~8.2 uH (±30%) @100KHz / 0.3V, 10uH and above (±20%) @1KHz / 0.3V

* Rated Current: the current at which the inductance decreases by 25% from the initial value; or the current at which temperature rise is $\Delta T \leq 40^\circ\text{C}$ ($T_a = 20^\circ\text{C}$), whichever is smaller.