

## FLQH series ( Rev. 4.0 )



The **FLQH** Series is a type of miniature wire-wound chip inductor designed on a special ferrite core. They are excellent for use in DC power supply circuits.

## Features

- \* RoHS compliant
- \* Low DC resistance, high current capacity, and high impedance characteristics
- \* Excellent solder heat resistance
- \* Both flow and reflow soldering methods can be employed

## Product Identification

**FLQH**      **32**      **L**      -      **470**      **M**  
 1                      2                      3                      4                      5

1. Product Code
2. Size Code: 3.2 \* 2.5mm
3. H: High current ; L: Lower height
4. Inductance: 47uH
5. Tolerance: J=±5%, K=±10%, M=±20%, N=±30%

## Test Equipment :

- \* HP4284A, HP42841A- L, IDC, Q, RDC
- \* HP8753D Network Analyzer - SRF

## Applications

- \* Personal computers
- \* Disk drives and computer peripherals
- \* Pagers, cordless phone
- \* DC power supply circuit

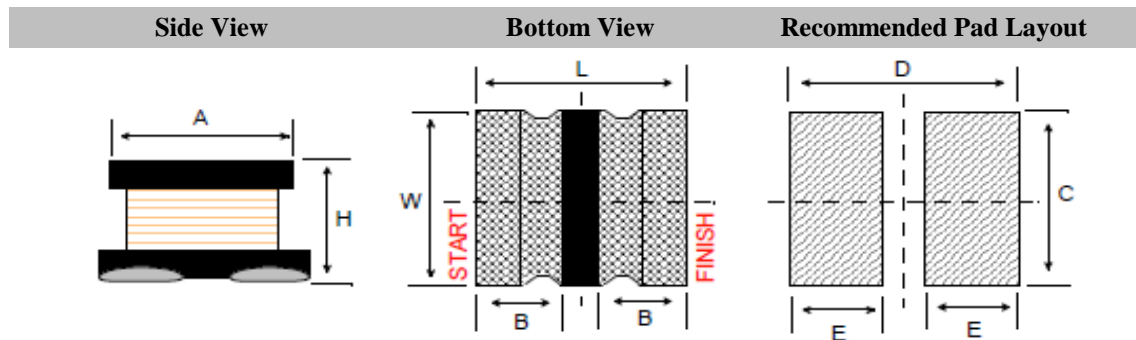
## Operating &amp; Storage Condition :

- \* Operating Temp : Stand Type: -40 to +85 °C
- \* Storage Temp : Stand Type -40 to +85 °C
- \* Storage Life Time: 6 Months @25 °C, RH 65%

## Standard Atmospheric Conditions :

- \* Ambient Temp : 20 ± 5 °C
- \* Relative Humidity : 65 ± 20%

## Dimension &amp; Recommended PAD Layout: [ mm ]



Size Code	A(±0.3)	B(ref.)	C(ref.)	D(ref.)	E(ref.)	H(±0.4)	L(±0.3)	W(±0.3)
FLQH20L	2.0±0.2	0.4~0.8	2.0	2.7	1.0	1.05max	2.0±0.2	1.6±0.2
FLQH20	2.0	0.4~0.8	1.8	2.5	0.7	1.4	2.1	1.5
FLQH25L	2.5±0.2	0.6~1.0	2.5	3.2	1.2	1.05max	2.5±0.2	2.1±0.2
FLQH25	2.0	0.4~0.8	2.8	3.5	0.7	1.8	2.5	2
FLQH32	2.5	0.7~1.2	3.5	4.5	1.6	2	3.2	2.5
FLQH43	3.6	1.0~1.8	4.2	5.5	2.3	2.6	4.5	3.2
FLQH56	5.0	1.1~1.9	6.5	7.0	2.5	4.7	5.7	5.0

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## Electrical Characteristics

P/N	Inductance (uH)	Test Freq. (MHz/0.2v)	DCR (Ω) max.	Isat (A) typ.	Irms (A) typ.
FLQH20L-1R0N	1.00	1.0	0.180	1.70	1.42
FLQH20L-1R5N	1.50	1.0	0.250	1.30	1.34
FLQH20L-2R2N	2.20	1.0	0.340	1.10	1.04
FLQH20L-3R3N	3.30	1.0	0.435	0.98	0.90
FLQH20L-4R7M	4.70	1.0	0.590	0.82	0.72
FLQH20L-5R6M	5.60	1.0	0.740	0.74	0.68
FLQH20L-6R8M	6.80	1.0	0.840	0.67	0.62
FLQH20L-100M	10.00	1.0	1.200	0.58	0.58
FLQH20L-220M	22.00	1.0	2.680	0.38	0.40

P/N	Inductance (uH)	Test Freq. (KHz/0.25v)	DCR (Ω) max.	IDC (A) max.	
FLQH20-R10M	0.10	100.0	0.018	4.24	
FLQH20-R12M	0.12	100.0	0.022	3.97	
FLQH20-R15M	0.15	100.0	0.023	3.87	
FLQH20-R18M	0.18	100.0	0.029	3.10	
FLQH20-R22M	0.22	100.0	0.034	3.07	
FLQH20-R27M	0.27	100.0	0.042	2.46	
FLQH20-R33M	0.33	100.0	0.048	2.07	
FLQH20-R39M	0.39	100.0	0.059	1.61	
FLQH20-R47M	0.47	100.0	0.068	1.53	
FLQH20-R56M	0.56	100.0	0.091	1.48	
FLQH20-R68M	0.68	100.0	0.101	1.37	
FLQH20-R82M	0.82	100.0	0.116	1.28	
FLQH20-1R0M	1.00	100.0	0.160	0.75	
FLQH20-1R5M	1.50	100.0	0.247	0.70	
FLQH20-2R0M	2.00	100.0	0.300	0.65	
FLQH20-2R2M	2.20	100.0	0.330	0.61	
FLQH20-2R7M	2.70	100.0	0.360	0.55	
FLQH20-3R3M	3.30	100.0	0.500	0.50	
FLQH20-3R9M	3.90	100.0	0.700	0.49	
FLQH20-4R7M	4.70	100.0	0.740	0.47	
FLQH20-6R8M	6.80	100.0	0.970	0.45	
FLQH20-8R2M	8.20	100.0	1.490	0.40	
FLQH20-100M	10.00	1.0	1.620	0.37	
FLQH20-120M	12.00	1.0	1.890	0.34	
FLQH20-150K/M	15.00	1.0	2.170	0.32	
FLQH20-220K/M	22.00	1.0	3.420	0.25	
FLQH20-270K/M	27.00	1.0	4.280	0.21	
FLQH20-330K/M	33.00	1.0	5.470	0.20	
FLQH20-390K/M	39.00	1.0	6.290	0.17	
FLQH20-470K/M	47.00	1.0	9.870	0.13	
FLQH20-680K/M	68.00	1.0	12.170	0.11	
FLQH20-820K/M	82.00	1.0	14.500	0.09	
FLQH20-101K/M	100.00	1.0	19.062	0.08	
FLQH20-121K/M	120.00	1.0	22.030	0.02	

\* Irms DC current (A) that will cause an approximate  $\Delta T$  of 40°C

\* Isat DC current (A) that will cause L to drop approximately 10%

\* Tolerance: J=±5%, K=±10%, M=±20%, N=±30%

## FLQH series (Rev. 4.0)

## Electrical Characteristics

P/N	Inductance (uH)	Test Freq. (MHz/0.2v)	DCR (Ω) max.	Isat (A) typ.	Irms (A) typ.
FLQH25L-1R0M	1.0	1.0	0.150	2.00	1.90
FLQH25L-1R5M	1.5	1.0	0.190	1.80	1.64
FLQH25L-2R2M	2.2	1.0	0.300	1.40	1.60
FLQH25L-3R3M	3.3	1.0	0.390	1.20	1.10
FLQH25L-4R7M	4.7	1.0	0.510	1.00	1.02
FLQH25L-5R6M	5.6	1.0	0.630	0.96	0.88
FLQH25L-6R8M	6.8	1.0	0.790	0.84	0.82
FLQH25L-100M	10.0	1.0	1.050	0.70	0.74
FLQH25L-220M	22.0	1.0	2.400	0.49	0.46

P/N	Inductance (uH)	Test Freq. (KHz/0.25v)	DCR (Ω) max.	IDC (mA) max.	
FLQH25-R22M	0.2	1.0	0.032	350	
FLQH25-R39M	0.4	1.0	0.420	330	
FLQH25-1R0M	1.0	1.0	0.780	300	
FLQH25-1R2M	1.2	1.0	0.090	290	
FLQH25-1R5M	1.5	1.0	0.100	280	
FLQH25-1R8M	1.8	1.0	0.110	270	
FLQH25-2R2M	2.2	1.0	0.120	250	
FLQH25-2R7M	2.7	1.0	0.200	240	
FLQH25-3R3M	3.3	1.0	0.240	230	
FLQH25-3R9M	3.9	1.0	0.280	220	
FLQH25-4R7M	4.7	1.0	0.300	210	
FLQH25-5R6M	5.6	1.0	0.340	205	
FLQH25-6R8M	6.8	1.0	0.440	200	
FLQH25-8R2M	8.2	1.0	0.590	195	
FLQH25-100K/M	10.0	1.0	0.680	190	
FLQH25-120K/M	12.0	1.0	0.770	185	
FLQH25-150K/M	15.0	1.0	0.870	180	
FLQH25-180K/M	18.0	1.0	1.200	175	
FLQH25-220K/M	22.0	1.0	1.340	170	
FLQH25-270K/M	27.0	1.0	2.860	165	
FLQH25-330K/M	33.0	1.0	2.100	160	
FLQH25-390K/M	39.0	1.0	2.350	155	
FLQH25-470K/M	47.0	1.0	3.300	150	
FLQH25-560K/M	56.0	1.0	3.700	145	
FLQH25-680K/M	68.0	1.0	6.000	135	
FLQH25-820K/M	82.0	1.0	6.900	125	
FLQH25-101K/M	100.0	1.0	7.750	110	
FLQH25-221K/M	220.0	1.0	13.420	90	

\* I<sub>rms</sub> DC current (A) that will cause an approximate ΔT of 40°C\* I<sub>sat</sub> DC current (A) that will cause L to drop approximately 10%

\* Tolerance: J=±5%, K=±10%, M=±20%, N=±30%

## FLQH series (Rev. 4.0)

## Electrical Characteristics

P/N	Inductance (uH) @1MHz	Q (ref.) @ KHz	DCR (Ω) max.	SRF (MHz) min.	IDC (mA) max.
FLQH32-R10M	0.1	10@2520	0.250	200.00	700
FLQH32-R18M	0.2	10@2520	0.250	200.00	650
FLQH32-R27M	0.3	10@2520	0.250	200.00	600
FLQH32-R33M	0.3	10@2520	0.250	200.00	550
FLQH32-R39M	0.4	10@2520	0.250	200.00	530
FLQH32-R56M	0.6	10@2520	0.250	160.00	530
FLQH32-R68M	0.7	10@2520	0.250	160.00	470
FLQH32-R82M	0.8	10@2520	0.250	120.00	450
FLQH32-1R0M	1.0	10@2520	0.500	100	445
FLQH32-1R2M	1.2	10@2520	0.600	100	425
FLQH32-1R5M	1.5	10@2520	0.600	75	400
FLQH32-1R8M	1.8	10@2520	0.700	60	390
FLQH32-2R2M	2.2	10@2520	0.800	50	370
FLQH32-2R7K	2.7	10@2520	0.900	43	320
FLQH32-3R3K	3.3	10@2520	1.000	38	300
FLQH32-3R9K	3.9	10@2520	1.100	35	290
FLQH32-4R7K	4.7	20@1000	1.200	31	270
FLQH32-5R6K	5.6	20@1000	1.300	28	250
FLQH32-6R8K	6.8	20@1000	1.500	25	240
FLQH32-8R2K	8.2	20@1000	1.600	23	225
FLQH32-100K	10.0	25@1000	1.800	20	190
FLQH32-120K	12.0	25@1000	2.000	18	180
FLQH32-150K	15.0	25@1000	2.200	16	170
FLQH32-180K	18.0	25@1000	2.500	15	160
FLQH32-220K	22.0	25@1000	2.800	14	150
FLQH32-270K	27.0	25@1000	3.100	13	125
FLQH32-330K	33.0	25@1000	3.500	12	115
FLQH32-390K	39.0	25@1000	3.900	11	110
FLQH32-470K	47.0	25@1000	4.300	11	100
FLQH32-560J	56.0	25@1000	4.900	10	85
FLQH32-680J	68.0	25@1000	5.500	9	80
FLQH32-820J	82.0	25@1000	6.200	9	80
FLQH32-101J	100.0	30@796	7.000	8	80
FLQH32-121J	120.0	30@796	8.000	8	75
FLQH32-151J	150.0	30@796	9.300	7	70
FLQH32-181J	180.0	30@796	10.200	6	65
FLQH32-221J	220.00	30@796	11.800	5.00	65
FLQH32-271J	270.00	30@796	12.500	5.00	65
FLQH32-331J	330.00	30@796	13.000	5.00	65
FLQH32-391J	390.00	30@796	22.000	5.00	50
FLQH32-471J	470@1KHZ	30@796	25.000	5.00	45
FLQH32-501J	500@1KHZ	30@796	27.000	5.00	42
FLQH32-561J	560@1KHZ	30@796	28.000	5.00	40
FLQH32-681J	680@1KHZ	30@796	30.000	5.00	35
FLQH32-102J	1000@1KHZ	30@796	39.200	5.00	30

\* Tolerance: J=±5%, K=±10%, M=±20%, N=±30%

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## Electrical Characteristics

P/N	Inductance (uH) @1MHz	DCR (Ω) max.	SRF (MHz) min.	SRF (MHz) typ.	IDC (mA) max.
FLQH32H-R47ML	0.5	0.038	100.0	200.0	2290
FLQH32H-1R0ML	1.0	0.078	100.0	200.0	1000
FLQH32H-2R2ML	2.2	0.126	64.0	120.0	790
FLQH32H-4R7ML	4.7	0.195	43.0	77.0	650
FLQH32H-100KL	10.0	0.390	26.0	50.0	450
FLQH32H-1R0M	1.0	0.117	100.0	150.0	800
FLQH32H-1R8M	1.8	0.140	64.0	100.0	780
FLQH32H-2R2M	2.2	0.169	64.0	100.0	600
FLQH32H-3R3M	3.3	0.180	54.0	100.0	500
FLQH32H-4R7M	4.7	0.260	43.0	66.0	450
FLQH32H-6R8M	6.8	0.350	30.0	45.0	380
FLQH32H-100K	10.0	0.572	26.0	40.0	300
FLQH32H-220K	22.0	0.923	19.0	27.0	250
FLQH32H-330K	33.0	1.350	17.0	22.0	220
FLQH32H-470K	47.0	1.690	15.0	19.0	170
FLQH32H-101K	100.0	4.550	10.0	13.0	100
FLQH32H-221K	220.0	10.920	6.8	8.5	70
FLQH32H-331K	330.0	13.000	5.6	7.0	60
FLQH32H-391K	390.0	22.100	5.0	6.6	60
FLQH32H-471K	470.0	24.700	5.0	6.2	60
FLQH32H-561K	560.0	28.600	5.0	5.7	60

\* The suffix "L" means the part with low DCR.

P/N	Inductance (uH) @1MHz	DCR (Ω) max.	IDC (mA) max.		
FLQH43H-1R0M	1.0	0.080	1080		
FLQH43H-1R5M	1.5	0.090	1000		
FLQH43H-2R2M	2.2	0.110	900		
FLQH43H-3R3M	3.3	0.130	800		
FLQH43H-4R7M	4.7	0.150	750		
FLQH43H-6R8M	6.8	0.200	720		
FLQH43H-100M	10.0	0.240	650		
FLQH43H-150M	15.0	0.320	570		
FLQH43H-220M	22.0	0.600	420		
FLQH43H-330M	33.0	1.000	310		
FLQH43H-470M	47.0	1.100	280		
FLQH43H-560M	56.0	1.340	260		
FLQH43H-680M	68.0	1.700	220		
FLQH43H-101M	100.0	2.200	190		
FLQH43H-151M	150.0	3.500	130		
FLQH43H-221M	220.0	4.000	110		
FLQH43H-331M	330.0	6.800	100		
FLQH43H-471M	470.0	8.500	90		

\* Tolerance: J=±5%, K=±10%, M=±20%, N=±30%

